Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 29.01.97 Test oil : ISO 4113

Combination No. : 9 400 087 479

Injection pump

Pump designation : PES6P120A720LS7257

: 0

EP type number : 9 400 087 086

Governor

Governer design. : RQV300...1050PA1029

: 4

Governer no. : 9 420 080 340

Cust. part No. : 0250742202

Customer—spec. information Customer : MBB

Motor : OM 447 LA

Power KW : 257.6

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.65
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 21.00

Firing order : 6-2-4-1-5-

: 3

Phasing : 0-60-120-180-240

Tolerance : + 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 13.70

Tolerance mm : \leftarrow 0.10

Del. quantity cm3/1000 strokes :

cm3/1000 strokes : 247.5

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s. : +- 4.0

Tolerance		
AME / 1000 CHANGE	: 5.0	control lever
CHOT TOOU STICKES	. 5.0	position degree : - 1
Check tolerance		Rated speed rpm : 1120
cm3/1000s.	: 9.0	+
		+ Rack travel in mm : 16.50
		† Tolerance mm : + 1.30
Rated speed rpm	• 300	<u> </u>
rated sheed that	. 300	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in m	m: 5.30	+
olerance mm	: +- 0.10	+ Rated speed rpm : 700
el. quantity		+ Aneroid pressure
3/1000 strokes	: 14.0	+ hPa : 1100
olerance m3/1000 strokes	70	+ Del. quantity + cm3/1000 strokes : 247.5
eck tolerance	: - 3.0	+ Tolerance
n3/1000s.	: +- 6.0	- cm3/1000 strokes : +- 1.0
preed		Check tolerance
olerance		+ cm3/1000s. : +- 4.0
m3/1000 strokes	: 8.0	Spreed
check tolerance		- colerance
m3/1000s.	: 12.0	+ cm3/1000 strokes : 5.0
		+ Check tolerance
D) CETTING OF TH	NIECTION DUMP	- cm3/1000s. : 9.0
(B) SETTING OF IN ⊮ITH GOVERNOR	MECITON POMP	Ī
MITH GOVERNOR		I
		- 🕹 CONTROL LEVER
SUIDE SLEEVE TRAN	VEL	+
		+ control lever
lated speed rpm	: 700	position degree : 55.0
uide sleeve	. F /F	tolerance degree : +- 4.0
ravel mm	: 5.45 : + 0.25	† control lever
lerance mm	0.23	position degree : 121.0
sted sneed rom	: 1050	+ tolerance dedree : +- 4.11
		+ tolerance degree : +- 4.0
uide sleeve ravel mm	: 7.80	RATED SPEED
ride sleeve		+ RATED SPEED + rack travel mm : 12.70
uide sleeve ravel mm olerance mm	: 7.80 : + 0.10	RATED SPEED rack travel mm : 12.70 Rated speed rpm : 1095
ravel mm plerance mm	: 7.80 : + 0.10	+ RATED SPEED + rack travel mm : 12.70
uide sleeve ravel mm plerance mm ated speed rpm	: 7.80 : + 0.10 : 300	RATED SPEED rack travel mm : 12.70 Rated speed rpm : 1095 Tolerance 1/min : + 5
ride sleeve ravel mm lerance mm	: 7.80 : + 0.10 : 300	RATED SPEED rack travel mm : 12.70 Rated speed rpm : 1095 Tolerance 1/min : + 5 rack travel mm : 4.00
uide sleeve ravel mm plerance mm ated speed rpm	: 7.80 : + 0.10 : 300	RATED SPEED rack travel mm : 12.70 Rated speed rpm : 1095 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1170
uide sleeve ravel mm olerance mm ated speed rpm uide sleeve ravel mm olerance mm	: 7.80 : + 0.10 : 300 : 0.75 : + 0.25	RATED SPEED rack travel mm : 12.70 Rated speed rpm : 1095 Tolerance 1/min : + 5 rack travel mm : 4.00
uide sleeve ravel mm olerance mm ated speed rpm uide sleeve ravel mm olerance mm	: 7.80 : + 0.10 : 300 : 0.75 : + 0.25 : 500	RATED SPEED rack travel mm : 12.70 Rated speed rpm : 1095 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1170 Tolerance 1/min : + 15
uide sleeve ravel mm olerance mm ated speed rpm uide sleeve ravel mm olerance mm	: 7.80 : + 0.10 : 300 : 0.75 : + 0.25 : 500	RATED SPEED rack travel mm : 12.70 Rated speed rpm : 1095 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1170 Tolerance 1/min : + 15 rack travel mm : 0.50
uide sleeve ravel mm olerance mm ated speed rpm uide sleeve ravel mm olerance mm	: 7.80 : + 0.10 : 300 : 0.75 : + 0.25 : 500	RATED SPEED rack travel mm : 12.70 Rated speed rpm : 1095 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1170 Tolerance 1/min : + 15
uide sleeve ravel mm olerance mm ated speed rpm uide sleeve ravel mm olerance mm ated speed rpm uide sleeve ravel mm olerance mm	: 7.80 : + 0.10 : 300 : 0.75 : + 0.25 : 500 : 3.55 : + 0.25	RATED SPEED rack travel mm : 12.70 Rated speed rpm : 1095 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1170 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
uide sleeve ravel mm olerance mm ated speed rpm uide sleeve ravel mm olerance mm ated speed rpm uide sleeve ravel mm oterance mm	: 7.80 : + 0.10 : 300 : 0.75 : + 0.25 : 500 : 3.55 : + 0.25	RATED SPEED rack travel mm : 12.70 Rated speed rpm : 1095 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1170 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
uide sleeve ravel mm olerance mm ated speed rpm uide sleeve ravel mm olerance mm ated speed rpm uide sleeve ravel mm oterance mm	: 7.80 : + 0.10 : 300 : 0.75 : + 0.25 : 500 : 3.55 : + 0.25 : 1165	RATED SPEED rack travel mm : 12.70 Rated speed rpm : 1095 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1170 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
ruide sleeve inavel mm olerance mm sated speed rpm olerance mm olerance mm sated speed rpm uide sleeve ravel mm olerance mm olerance mm sated speed rpm olerance mm sated speed rpm olerance mm	: 7.80 : + 0.10 : 300 : 0.75 : + 0.25 : 500 : 3.55 : + 0.25 : 1165	RATED SPEED rack travel mm : 12.70 Rated speed rpm : 1095 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1170 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1300
uide sleeve ravel mm olerance mm ated speed rpm uide sleeve ravel mm olerance mm ated speed rpm uide sleeve ravel mm olerance mm	: 7.80 : + 0.10 : 300 : 0.75 : + 0.25 : 500 : 3.55 : + 0.25 : 1165	RATED SPEED rack travel mm : 12.70 Rated speed rpm : 1095 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1170 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
Rated speed rpm guide sleeve ravel mm Tolerance mm Rated speed rpm guide sleeve ravel mm Tolerance mm Rated speed rpm guide sleeve ravel mm Tolerance mm Rated speed rpm guide sleeve ravel mm Tolerance mm Rated speed rpm guide sleeve ravel mm Tolerance mm	: 7.80 : + 0.10 : 300 : 0.75 : + 0.25 : 500 : 3.55 : + 0.25 : 1165	RATED SPEED rack travel mm : 12.70 Rated speed rpm : 1095 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1170 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1300 LOW IDLE
ruide sleeve inavel mm olerance mm sated speed rpm olerance mm olerance mm sated speed rpm uide sleeve ravel mm olerance mm olerance mm sated speed rpm olerance mm sated speed rpm olerance mm	: 7.80 : + 0.10 : 300 : 0.75 : + 0.25 : 500 : 3.55 : + 0.25 : 1165 : 9.45 : + 0.25	RATED SPEED rack travel mm : 12.70 Rated speed rpm : 1095 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1170 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1300 LOW IDLE control lever
uide sleeve ravel mm olerance mm ated speed rpm uide sleeve ravel mm olerance mm ated speed rpm uide sleeve ravel mm olerance mm ated speed rpm uide sleeve ravel mm olerance mm olerance mm	: 7.80 : + 0.10 : 300 : 0.75 : + 0.25 : 500 : 3.55 : + 0.25 : 1165 : 9.45 : + 0.25	RATED SPEED rack travel mm : 12.70 Rated speed rpm : 1095 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1170 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1300 LOW IDLE

		l Object
aananal lawan		+ Check + speed 1/min : > 80
control lever	. 17.0	+ Check
position degree tolerance degree	· - 40	= check
toterance degree	, + 4.0	T speed (//ii/ii/
Testing:		
Dated aread non	: 300	FUEL DELIVERY CHARACTERISTICS
Rated speed rpm rack travel mm		Aneroid pressure
Tolerance mm		hPa : 1100
Oterance mm	; +- 0.10	Rated speed rpm : 1050
Rated speed rpm	: 100	Del. quantity
rated speed ipil	, 100	+ cm3/1000 strokes : 242.0
CRT mm min.	; > 8.00	Tolerance
CAT THE TOTAL	, > 0.00	- cm3/1000 strokes : +- 2.0
Rated speed rpm	: 350	+ Check tolerance
Marca speed ipili	. 550	+ cm3/1000s. : +- 5.0
		+ Spreed
TORQUE CONTROL		+ Tolerance
. SINGE SOUTHINGE		- cm3/1000 strokes : 8.0
Rated speed rpm	: 700	+ Check tolerance
rack travel mm		- cm3/1000s. : 12.0
Tolerance mm		+
	• - • • •	Aneroid pressure
Rated speed rpm	: 1050	∔ hPa : -
rack travel mm	: 13.70	Rated speed rpm : 500
Tolerance mm	: ← 0.10	+ Del. quantity
		+ cm3/1000 strokes : 123.0
		Tolerance
ANEROID/ALTITUDE		+ cm3/1000 strokes : +- 1.0
COMPENSATOR TEST		+ Check tolerance
		+ cm3/1000s. : + 4.0
		+ Spreed
SETTING		+ Tolerance
		- cm3/1000 strokes : 5.0
Rated speed rpm	: 500	+ Check tolerance
Pressure hPa		+ cm3/1000s. : 9.0
rack travel mm	: 13.70	†
Tolerance mm	: ← 0.10	†
Pressure hPa	• -	STARTING FUEL DELIVERY
Rated speed rpm	500	
······································		Rated speed rpm : 100
MEASUREMENT		+ Del. quantity
· · - · · · · · · · · · · · · · · · · ·		- cm3/1000 strokes : 235.0
Rated speed rpm	: 500	+ Tolerance
ester transmit		+ cm3/1000 strokes : +- 10.0
Pressure hPa	: 720	+ Check tolerance
rack travel mm	: 2.65	+ cm3/1000s. : + 14.0
Tolerance mm	: ← 0.15	+
		†
Pressure hPa	: 400	†
rack travel mm	: 0.80	100 701 5
Tolerance mm	: ← 0.10	T LOW IDLE
Start interlock		Rated speed rpm : 300
		→ Del. quantity
Rated speed rpm	: > 100	+ cm3/1000 strokes : 14.0
Rated speed rpm		† Tolerance
ਾਰਦਦਾ ਰਾਜਦਾਦਾ ਹ ਾ ਦੀ		+ cm3/1000 strokes : $+$ 3.0
		•

Check tolerance cm3/1000s.

: +- 6.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 29.01.97 Test oii : ISO 4113

Combination No. : 9 400 087 481

Injection pump

Pump designation : PES6P120A320/3RS3264

EP type number : 9 400 087 075

Governor

Governer design. : RQV350/870...900PA11

: 11

Governer no. : 9 420 080 356

Cust. part No. : 3355248

Customer—spec. information Customer : CUMMINS

Motor : 6CTA
Power KW : 207.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : ← 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 3.50
Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm: + 1.50

Firing order : 1-5-3-6-2-

. 4

Phasing : 0-60-120-180-240

Tolerance : \leftarrow 0.50

Check

tolerance *NW : + 0.75

Start of delivery blocking

*NW after s.o.d. : 8.00

Tolerance : +- 0.10

Check

tolerance *NW : + 0.23

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 870

Rack travel in mm: 12.65
Tolerance mm: + 0.05

Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 223.0

		+ Rated speed rpm : 980
Tolerance		+ guide sleeve
cm3/1000 strokes	: +- 1.0	travel mm : 8.85 Tolerance mm : +- 0.25
Check tolerance		+
cm3/1000s.	: +- 4.0	GUIDE SLEEVE POSITION
Spreed		+
Tolerance		T control lever
cm3/1000 strokes	5.0	position degree : - 1
CIMO TOCO GET GREE	. 3.0	+ Rated speed rpm : 945
Check tolerance		+
cm3/1000s.	: 9.0	+ Rack travel in mm : 16.50
		Tolerance mm : +- 1.30
	750	
Rated speed rpm	: 350	+ FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm		+ Rated speed rpm : 870
	: 0.10	+ Aneroid pressure
Del. quantity	: 10.0	+ hPa : -
cm3/1000 strokes Tolerance	: 10.0	+ Del. quantity + cm3/1000 strokes : 223.0
cm3/1000 strokes	· +- 3.0	Tolerance
Check tolerance		+ cm3/1000 strokes : +- 1.0
	: ← 6.0	+ Check tolerance
Spreed		+ cm3/1000s. : +- 4.0
Tolerance		+ Spreed
cm3/1000 strokes	: 8.0	+ Tolerance
Check tolerance	: 12.0	+ cm3/1000 strokes : 5.0 + Check tolerance
cm3/1000s.	: 12.0	+ cm3/1000s. : 9.0
(B) SETTING OF INJ	ECTION DIMO	1
WITH GOVERNOR	2011011 1011	
		CONTROL LEVER
GUIDE SLEEVE TRAVE	L	- control lever
		position degree : 56.0
Rated speed rpm	: 700	tolerance degree : +- 4.0
guide sleeve	. / 50	†
	: 4.50 : +- 0.10	<pre>+ control lever + position degree : 111.0</pre>
locelance into	0.10	tolerance degree : + 4.0
Rated speed rpm	: 910	+
guide sleeve		+
travel mm	: 5.75	+ ASSEMBLY GOVERNOR SETTING
Tolerance mm	: +- 0.25	+
	. 250	+ Rated speed rpm : 919 + rack travel mm : 11.60
The state of the s	: 250	† rack travel mm : 11.60
guide sleeve travel mm	: 0.75	Rated speed rpm : 955
Tolerance mm	: +- 0.25	+ Tolerance 1/min : + 4
		+ rack travel mm : 4.00
Rated speed rpm	: 400	+
guide sleeve	a m-	+ rack travel mm : 0.50
travel mm	2.75	Tolerance mm : + 0.50
Tolerance mm	: ← 0.25	Rated speed rpm : 1050
		т

.	000	†
Rated speed rpm		+ LOW IDLE
rack travel mm	: 11.60	T LOW IDLE
Rated speed rpm	: 956	I
Tolerance 1/min		- control lever
rack travel mm		position degree : 73.0
I GIGN CI GACC IINII	. 4.00	tolerance degree : +- 4.0
rack travel mm	: 0.50	toter unite degree +.0
Tolerance mm		+ control lever
Rated speed rpm	. 7.5%	position degree : 18.0
	, , , , , ,	+ tolerance degree : +- 4.0
		+
Rated speed rpm	: 921	+ Testing:
rack travel mm		+
		+ Rated speed rpm : 350
Rated speed rpm	: 957	rack travel mm : 6.20
Tolerance 1/min		+ Tolerance mm : +- 0.10
rack travel mm	: 4.00	+
		+ Rated speed rpm : 100
rack travel mm		†
Tolerance mm		+ CRT mm min. :> 10.00
Rated speed rpm	: 1050	750
		+ Rated speed rpm : 350
Datad annual annu	: 922	Ť
Rated speed rpm rack travel mm		TORQUE CONTROL
rack travet min	: 11.60	T TORGOE CONTROL
Rated speed rpm	: 958	Rated speed rpm : 870
Tolerance 1/min		rack travel mm : 12.65
rack travel mm		Tolerance mm : + 0.05
I GUN CI GACC IIIII	. 4.00	Total alice military 1. V 0.03
rack travel mm	: 0.50	Rated speed rpm : 500
		rack travel mm : 12.65
Tolerance mm Rated speed rpm	: 1050	rack travel mm : 12.65 Tolerance mm : + 0.05
,		+
		+
Rated speed rpm		+ Start interlock
rack travel mm	: 11.60	+
		+ Rated speed rpm : > 100
Rated speed rpm		+ Rated speed rpm : < 270
Tolerance 1/min		† ••••
rack travel mm	: 4.00	+ Check
سمار شموريا مس	. 0.50	speed 1/min :> 80
rack travel mm	: 0.50 : +- 0.50	+ Check + speed 1/min : < 290
Tolerance mm Rated speed rpm		
nated speed (bill	. 1000	1
		1
Rated speed rpm	: 924	
rack travel mm		+ STARTING FUEL DELIVERY
==::		+
Rated speed rpm	: 960	+ Rated speed rpm : 100
Tolerance 1/min		rack travel mm : 20.00
rack travel mm	: 4.00	Tolerance mm : + 1.00
		+ Del. quantity
rack travel mm		- cm3/1000 strokes : 285.0
Tolerance mm	: ← 0.50	+ Tolerance
Rated speed rpm	: 1050	+ cm3/1000 strokes : +- 10.0
		†

Check tolerance cm3/1000s. : +- 14.0

LOW IDLE

Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 10.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 17.03.97 Test oil : ISO 4113

Combination No. : 9 400 087 482

Injection pump

Pump designation : PES6P12DA32D/3RS3264

EP type number : 9 400 087 075

Governor

Governer design. : RQV350/720...750PA11

: 12

Governer no. : 9 420 080 357

Cust. part No. : 3355249

Customer—spec. information Customer : CUMMINS Motor : 6CTA Power KW : 180.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : ∠26.0 Tolerance bar : ← 1.0

Prestroke mm : 3.50
Tolerance mm : + 0.05
Check

tolerance mm : ← 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Tolerance : \leftarrow 0.50

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 720

Rack travel in mm : 11.85

Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 215.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance cm3/1000s. : +- 4.0

Tolerance cm3/1000 strokes : 5.0	- - control lever - position degree : - 1
Check tolerance cm3/1000s. : 9.0	- Rated speed rpm : 805
	- Rack travel in mm : 16.50 - Tolerance mm : +- 1.30
Rated speed rpm : 350	- FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 5.80	_
Tolerance mm : + 0.10	- Rated speed rpm : 720
Del. quantity	- Aneroid pressure
cm3/1000 strokes : 12.0	- hPa : -
Tolerance	- Del. quantity
cm3/1000 strokes : +- 3.0	- cm3/1000 strokes : 215.0
Check tolerance	- Tolerance
cm3/1000s. : +- 6.0	- cm3/1000 strokes : $+$ 1.0
Spreed	- Check tolerance
Tolerance	- cm3/1000s. : +- 4.0
cm3/1000 strokes : 8.0	- Spreed
Check tolerance	- Tolerance
cm3/1000s. : 12.0	- cm3/1000 strokes : 5.0
4	- Check tolerance
-	- cm3/1000s. : 9.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	-
	- CONTROL LEVER
GUIDE SLEEVE TRAVEL	-
GOING OFFERE LIMITE	- control lever
Rated speed rpm : 600	- position degree : 106.0
guide sleeve	- tolerance degree : +- 4.0
travel mm : 4.50	-
Tolerance mm : + 0.10	- RATED SPEED
TOTAL MINISTER CONTRACTOR	-
Rated speed rpm : 820	- rack travel mm : 0.50
guide sleeve	- Tolerance mm : + 0.50
travel mm : 8.25	- Rated speed rpm : 900
Tolerance mm : + 0.25	-
70(0) 4.100 11111	_
Rated speed rpm : 300 guide sleeve	-
travel mm : 1.05	- LOW IDLE
Tolerance mm : + 0.25	•
+	•
Rated speed rpm : 420	- control lever
guide sleeve	position degree : 71.0
travel mm : 3.35	tolerance degree : + 4.0
Tolerance mm : \leftarrow 0.25	•
+	· Testing:
Rated speed rpm : 770	-
guide sleeve	- Rated speed rpm : 350
travel mm : 5.75	rack travel mm : 5.80
Tolerance mm : + 0.25	Tolerance mm : + 0.10
+	
+	Rated speed rpm : 100
GUIDE SLEEVE POSITION	•
1	CRT mm min. :> 10.00
'	

,

TORQUE CONTROL

Rated speed rpm : 720 rack travel mm : 11.85 Tolerance mm : + 0.05

Rated speed rpm : 500 rack travel mm : 11.85 Tolerance mm : + 0.05

Start interlock

Rated speed rpm : > 100 Rated speed rpm : < 270

Check

speed 1/min : > 80

Check

speed 1/min : < 290

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : +- 1.00

Del. quantity

cm3/1000 strokes : 280.0

Tolerance

cm3/1000 strokes : +- 10.0

Check tolerance

cm3/1000s. : + 14.0

LOW IDLE

Rated speed rpm : 350

Del. quantity

cm3/1000 strokes : 12.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. : +- 6.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 29.01.97 : ISO 4113

Combination No. : 9 400 087 483

Injection pump

Pump designation : PES5P120A720LS7280

EP type number : 9 400 087 087

Governor

Governer design. : RQV300...950PA1029

Governer no.

: 9 420 080 358

Cust. part No.

: 0250744402

Customer-spec. information

Customer : MBB : OM 449 LA Motor

: 184.0

Power KW

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C

Tolerance °C

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 bar

Tolerance bar : **←** 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar :

Tolerance bar : + 1.0

Prestroke mm 4.65

Tolerance mm : +- 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 21.00

Firing order : 1-3-5-4-2

: 0-72-144-216-288 Phasing

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm : 12.25

: +- 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 202.5

Tolerance

cm3/1000 strokes : +-1.0

Check tolerance

cm3/1000s. : ÷-4.0

Spreed

Tolerance

5.0 cm3/1000 strokes :

Check tolerance cm3/1000s. : 9.0	Rack travel in mm: 16.50 Tolerance mm: + 1.30
Rated speed rpm : 300	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 5.10 Tolerance mm : 0.10 Del. quantity	Rated speed rpm : 600 Aneroid pressure hPa : 1000
cm3/1000 strokes : 11.0 Tolerance	<pre>Del. quantity cm3/1000 strokes : 202.5</pre>
cm3/1000 strokes : +- 3.0 Check tolerance	+ Tolerance + cm3/1000 strokes : +- 1.0
cm3/1000s. : +- 6.0 Spreed	+ Check tolerance + cm3/1000s. : + 4.0
Tolerance cm3/1000 strokes : 8.0 Check tolerance	+ Spreed + Tolerance + cm3/1000 strokes : 5.0
cm3/1000s. : 12.0	+ cm3/1000 strokes : 5.0 + Check tolerance + cm3/1000s. : 9.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	<u></u>
CUIDE OUTSUE TOAVE	+ CONTROL LEVER + control lever
GUIDE SLEEVE TRAVEL	position degree : 52.0
Rated speed rpm : 700 guide steeve	tolerance degree : +- 4.0
travel mm : 5.45 Tolerance mm : + 0.25	+ control lever + position degree : 117.0
Rated speed rpm : 1050 guide sleeve	tolerance degree : + 4.0 RATED SPEED
travel mm : 7.80 Tolerance mm : +- 0.10	rack travel mm : 11.20 Rated speed rpm : 1005
Rated speed rpm : 300	Tolerance 1/min : +- 5
guide sleeve travel mm : 0.75	rack travel mm : 4.00 Rated speed rpm : 1115
Tolerance mm : +- 0.25	Tolerance 1/min : + 15
Rated speed rpm : 500 guide sleeve	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1250
travel mm : 3.55 Tolerance mm : + 0.25	+ Rated speed rpm : 1250
Rated speed rpm : 1165	<u></u>
guide sleeve travel mm : 9.45 Tolerance mm : +- 0.25	LOW IDLE
	- control lever
GUIDE SLEEVE POSITION	position degree : 80.0 tolerance degree : +- 4.0
control lever position degree : - 1 Rated speed rpm : 1120	control lever position degree : 15.0 tolerance degree : +- 4.0

Testing:

300 Rated speed rpm 5.10 rack travel mm Tolerance mm : +- 0.10

Rated speed rpm 100

8.00 CRT mm min. : >

325 Rated speed rpm

TORQUE CONTROL

Rated speed rpm 600 12,25 rack travel mm Tolerance mm : +- 0.05

950 Rated speed rpm 12.25 rack travel mm : +- 0.05 Tolerance mm

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm 500 Pressure hPa 1000 12.25 rack travel mm 0.05 Tolerance mm

Pressure hPa Rated speed rpm 500

MEASUREMENT

500 Rated speed rpm :

600 Pressure hPa rack travel mm 2.00 Tolerance mm : + 0.10

360 Pressure hPa 0.55 rack travel mm : +- 0.05 Tolerance mm

Start interlock

100 Rated speed rpm : > Rated speed rpm 220

Check speed 1/min

: > 80

Check speed 1/min : < 240

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 1000 Rated speed rpm 950 Del. quantity

cm3/1000 strokes : 206.0

Tolerance

cm3/1000 strokes : +-2.0 Check tolerance

cm3/1000s.

5.0 Spreed

Tolerance

8.0 cm3/1000 strokes : Check tolerance

cm3/1000s.

12.0

Aneroid pressure

hPa Rated speed rpm

500

Del. quantity cm3/1000 strokes : 116.0 Tolerance

cm3/1000 strokes : +-1.0

Check tolerance cm3/1000s.

4.0

Spreed Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s.9.0

STARTING FUEL DELIVERY

Rated speed rpm 100

Del. quantity

cm3/1000 strokes : 250.0

Tolerance

cm3/1000 strokes : + 10.0

Check tolerance

cm3/1000s. : +- 14.0

LOW IDLE

300 Rated speed rpm Del. quantity

cm3/1000 strokes : 11.0

Tolerance

cm3/1000 strokes 3.0

Check tolerance

cm3/1000s. 6.0 : +-

Tolerance cm3/1000 strokes : 3.0

Check tolerance cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 29.01.97 Edition : ISO 4113 Test oil

Combination No. : 9 400 087 484

Injection pump

Pump designation : PES5P120A720LS7280

: 9 400 087 087 EP type number

Governor

Governer design. : RQV300...1050PA1114

Governer no. : 9 420 080 361

Cust. part No. : 0240747602

Customer-spec. information

: MBB Customer : OM 449 A Motor

: 184.0

Power KW

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm 4.65 Tolerance mm : +- 0.05

Check

tolerance mm ; +- 0.10

Rack travel in mm : 21.00

Firing order : 1-3-5-4-2

: 0-72-144-216-288 Phasing

: +- 0.50 Tolerance

Check

: +- 0.75 tolerance *NW

BASIC SETTING

600 Rated speed rpm :

Rack travel in mm: 12.30

Tolerance mm : +- 0.10

Del. quantity

cm3/1000 strokes : 194.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 4.0

Tolerance cm3/1000 strokes : 5.0	+ control lever + position degree : - 1
Check tolerance cm3/1000s. : 9.0	Rated speed rpm : 1120
	Rack travel in mm : 16.50 Tolerance mm : +- 1.30
Rated speed rpm : 300	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 5.30	-
Tolerance mm : + 0.10	Rated speed rpm : 600
Del. quantity	+ Aneroid pressure
cm3/1000 strokes : 12.0	+ hPa : 800
Tolerance	+ Del. quantity
cm3/1000 strokes : +- 3.0	+ cm3/1000 strokes : 194.0
Check tolerance	+ Tolerance
$cm3/1000s.$: \leftarrow 6.0	+ cm3/1000 strokes : +- 1.0
Spreed	+ Check tolerance
Tolerance	+ cm3/1000s. : + 4.0
cm3/1000 strokes : 8.0	+ Spreed
Check tolerance	+ Tolerance
cm3/1000s. : 12.0	+ cm3/1000 strokes : 5.0
	+ Check tolerance + cm3/1000s. : 9.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	+ (115710005
	+
	+ CONTROL LEVER
GUIDE SLEEVE TRAVEL	_
700	+ control lever
Rated speed rpm : 700	+ position degree : 55.0
guide sleeve travel mm : 5.45	tolerance degree : +- 4.0
Tolerance mm : +- 0.25	control lever
Oteracice and	position degree : 121.0
Rated speed rpm : 1050	+ tolerance degree : +- 4.0
guide sleeve	+
travel mm : 7.80	A RATED SPEED
Tolerance mm : + 0.10	+ rack travel mm : 11.10
	Rated speed rpm : 1110
Rated speed rpm : 300	+ Tolerance 1/min : + 5
guide sleeve	+
travel mm : 0.75	+ rack travel mm : 4.00
Tolerance mm : + 0.25	+ Rated speed rpm : 1170
Datad annual annual 500	+ Tolerance 1/min : + 15
Rated speed rpm : 500	rack travel mm : 0.50
guide sleeve travel mm : 3.55	
travel mm : 3.55 Tolerance mm : +- 0.25	+ Tolerance mm : +- 0.50 + Rated speed rpm : 1300
roterance mm : += 0.23	T Kated Speed Ppill : 1500
Rated speed rpm : 1165	I
guide sleeve	1
travel mm : 9.45	
Tolerance mm : + 0.25	LOW IDLE
TO COT ON TO THAT	+
AUTOR OF STATE PROTECTION	†
GUIDE SLEEVE POSITION	+ control lever
	+ position degree : 82.0
	+ tolerance degree : +- 4.0

		+
control lever		Pressure hPa : 1080
position degree	: 17.0	+ rack travel mm : 0.25
tolerance degree	: +- 4.0	+ Tolerance mm : + 0.05
		+
Testing:		+ Pressure hPa : 1200
		+ rack travel mm : 0.60
Rated speed rpm	: 300	+ Tolerance mm : + 0.10
rack travel mm	: 5.30	1
Tolerance mm	: +- 0.10	→ Start interlock
		+
Rated speed rpm	: 100	+ Rated speed rpm : > 100
,		+ Rated speed rpm : < 250
CRT mm min.	: > 8.50	<u> </u>
		+ Check
Rated speed rpm	: 325	+ speed 1/min : > 80
·		+ Check
		+ speed 1/min : < 260
TORQUE CONTROL		+
		+
Rated speed rpm	: 600	+ FUEL DELIVERY CHARACTERISTICS
rack travel mm	: 12.30	+
Tolerance mm	: +- 0.10	+ Aneroid pressure
		+ hPa : 1500
Rated speed rpm	: 1050	Rated speed rpm : 1050
rack travel mm	: 12.10	+ Del. quantity
Tolerance mm	: +- 0.10	+ cm3/1000 strokes : 196.0
		† Tolerance
Rated speed rpm	: 800	+ cm3/1000 strokes : +- 2.0
rack travel mm		+ Check tolerance
Tolerance mm	: +- 0.10	+ cm3/1000s. : + 5.0
	000	+ Spreed
Rated speed rpm	: 900	+ Tolerance
rack travel mm		+ cm3/1000 strokes : 8.0
Tolerance mm	: +- 0.10	+ Check tolerance
	050	+ cm3/1000s. : 12.0
Rated speed rpm	: 950	†
rack travel mm	: 12.50	+ Aneroid pressure
Tolerance mm	: +- 0.10	+ hPa : 1500
		+ Rated speed rpm : 800
***************************************		+ Del. quantity
ANEROID/ALTITUDE		+ cm3/1000 strokes : 220.5 + Tolerance
COMPENSATOR TEST		+ cm3/1000 strokes : +- 2.0
		+ Check tolerance
		+ cm3/1000s. : + 5.0
2-stage DA setti	na	+ Spreed
2-stage LDA setti	i ig	Tolerance
Rated speed rpm	: 600	= cm3/1000 strokes : 8.0
Pressure hPa	: 800	+ Check tolerance
riessure iira	. 000	+ cm3/1000s. : 12.0
MEASUREMENT		1
HEUDOL/FLIFIA I		Aneroid pressure
Pressure hPa	: 360	+ hPa : -
rack travel mm	: -1.50	Rated speed rpm : 500
Tolerance mm	: +- 0.10	+ Del. quantity
	 	+ cm3/1000 strokes : 121.0
Pressure hPa	: 500	+ Tolerance
rack travel mm	: -0.50	+ cm3/1000 strokes : + 1.0
Tolerance mm	: +- 0.10	+
		•

Check tolerance
cm3/1000s. : +- 4.0
Spreed
Tolerance
cm3/1000 strokes : 5.0
Check tolerance
cm3/1000s. : 9.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm3/1000 strokes : 250.0
Tolerance
cm3/1000 strokes : + 10.0
Check tolerance
cm3/1000s. : + 14.0

LOW IDLE

300 Rated speed rpm Del. quantity 12.0 cm3/1000 strokes : Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance 8.0 cm3/1000 strokes : Check tolerance 12.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 29.01.97 Edition Test oil : ISO 4113

Combination No. : 9 400 087 485

Injection pump

Pump designation : PES5P120A720LS7280

EP type number : 9 400 087 087

Governor

Governer design. : RQV300...950PA1029

Governer no. : 9 420 080 363

Cust. part No. : 0250744502

Customer-spec. information

: MBB Customer Moto: : OM 449 LA

Power KW : 220.7

TEST BENCH REQUIREMENTS

: 4.1 Inlet line

Test oil inlet

temp. °C 40 Tolerance °C 2.0

: 1 417 413 047 Overflow valve

Inlet press. bar : 2.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 bar : +- 1.5 Tolerance bar

: 1 680 750 075 Test lines

Outside diameter : 8.0 x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm 4.65 : + 0.05 Tolerance mm

Check

: + 0.10tolerance mm

Rack travel in mm: 21.00

Firing order : 1-3-5-4-2

Phasing : 0-72-144-216-288

Tolerance : +- 0.50

Check

tolerance °NW : + - 0.75

BASIC SETTING

700 Rated speed rpm :

Rack travel in mm: 13.75

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 263.5

Tolerance

cm3/1000 strokes : +-1.0

Check tolerance

cm3/1000s. : +- 4.0

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance cm3/1000S.	: 9.0	Rack travel in mm : 16.50 Tolerance mm : +- 1.30
Rated speed rpm	: 300	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm Tolerance mm Del. quantity	: 5.30 : + 0.10	Rated speed rpm : 700 Aneroid pressure hPa : 1300
cm3/1000 strokes Tolerance	+	Del. quantity cm3/1000 strokes : 263.5
cm3/1000 strokes Check tolerance	+	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
cm3/1000S. Spreed Tolerance	0.0	cm3/1000s. : +- 4.0 Spreed
cm3/1000 strokes Check tolerance	+	Tolerance cm3/1000 strokes : 5.0
cm3/1000s.	: 12.0	Check tolerance cm3/1000s. : 9.0
(B) SETTING OF IN WITH GOVERNOR	JECTION PUMP	CONTROL LEVER
GUIDE SLEEVE TRAV	EL +	control lever
Rated speed rpm guide sleeve	: 700	position degree : 52.0 tolerance degree : +- 4.0
travel mm Tolerance mm	: 5.45 : + 0.25	control lever position degree : 117.0 talerance degree : +- 4.0
Rated speed rpm guide sleeve	+	RATED SPEED
travel mm Tolerance mm	: 7.80 : + 0.10	rack travel mm : 12.70 Rated speed rpm : 995 Tolerance 1/min : +- 5
Rated speed rpm guide sleeve	: 300	rack travel mm : 4.00
travel mm Tolerance mm	: 0.75 : + 0.25	Rated speed rpm : 1125 Tolerance 1/min : +- 15
Rated speed rpm guide sleeve travel mm Tolerance mm	: 3.55	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1250
Rated speed rpm	: 1165	
guide steeve travel mm Tolerance mm	: 9.45 : + 0.25	LOW IDLE
GUIDE SLEEVE POSI		control lever position degree : 83.0 tolerance degree : +- 4.0
control lever position degree Rated speed rpm	: - 1 : 1120	control lever position degree : 18.0 tolerance degree : +- 4.0

T	es	t'	ìr	na	:

300 Rated speed rpm 5.30 rack travel mm 0.10 Tolerance mm

100 Rated speed rpm :

CRT mm min. : > 9.00

325 Rated speed rpm :

TORQUE CONTROL

700 Rated speed rpm rack travel mm 13.75 Tolerance mm : +- 0.05

950 Rated speed rpm rack travel mm 13.75 : +- 0.05 Tolerance mm

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

500 Rated speed rpm 1300 Pressure hPa : 13.75 rack travel mm : +- 0.05 Tolerance mm

Pressure hPa 500 Rated speed rom

MEASUREMENT

500 Rated speed rpm

800 Pressure hPa rack travel mm 2.85 : + - 0.15Tolerance mm

480 Pressure hPa 0.90 rack travel mm : +- 0.10 Tolerance mm

Start interlock

Rated speed rpm : > 100 Rated speed rpm : < 220

Check

speed 1/min : > 80

Check

: < 240 speed 1/min

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

1300 hPa 950 Rated speed rpm Del. quantity

cm3/1000 strokes : 256.0 Tolerance

cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. : +-5.0

Spreed

Tolerance cm3/1000 strokes 8.0

Check tolerance cm3/1000s.12.0

Aneroid pressure

hPa 500 Rated speed rpm Del. quantity

cm3/1000 strokes : 121.0 Tolerance

: +-1.0 cm3/1000 strokes Check tolerance cm3/1000s.4.0

Spreed

Tolerance cm3/1000 strokes : 5.0

Check tolerance cm3/1000s.

9.0

3.0

: +-

STARTING FUEL DELIVERY

Rated speed rpm 100 Del. quantity

cm3/1000 strokes :

250.0 Tolerance

cm3/1000 strokes : + 10.0

Check tolerance cm3/1000s. : +- 14.0

LOW IDLE

Rated speed rpm 300 Del. quantity 17.0

cm3/1000 strokes :

Tolerance cm3/1000 strokes

Check tolerance : +cm3/1000s.6.0

Tolerance

cm3/1000 strokes : Check tolerance cm3/1000s. : 8.0

12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 29.01.97 Test oil : ISO 4113

Combination No. : 9 400 087 486

Injection pump

Pump designation : PES5P120A720LS7329 EP type number : 9 400 087 088

Governor

Governer design. : RQV300...1050PA1055

Governer no. : 9 420 080 337

Cust. part No. : 4750747002

Customer-spec. information

Customer : MBB
Motor : 0M449LA
Power KW : 220.8

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.05
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-3-5-4-2

Phasing : 0-72-144-216-288

Tolerance : \leftarrow 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 15.15 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 266.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 4.0

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance cm3/1000s.	: 9.0
Rated speed rpm	: 300
Rack travel in man Tolerance man Del. quantity	: 6.00 : + 0.10
cm3/1000 strokes Tolerance	: 14.0
cm3/1000 strokes Check tolerance	: ← 3.0
cm3/1000s. Spreed	: ← 6.0
Tolerance cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	: 12.0
(B) SETTING OF IN WITH GOVERNOR GUIDE SLEEVE TRAV	
Rated speed rpm	: 1100
guide sleeve travel mm Tolerance mm	: 7.65 : ← 0.25
Rated speed rpm	: 300
guide sleeve travel mm Tolerance mm	: 1.40 : + 0.20
Rated speed rpm	
guide sleeve travel mm	
Tolerance mm	: 3.25 : + 0.25
Rated speed rpm guide sleeve	: 900
travel mm Tolerance mm	: 5.85 : ← 0.25
Rated speed rpm	: 1210
guide sleeve travel mm	: 9.55
guide sleeve	

Rack travel in mm: 16.50 Tolerance mm : +- 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP 1050 Rated speed rpm : Aneroid pressure : 1200 hPa Del. quantity cm3/1000 strokes : 266.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 60.0 tolerance degree : + 4.0 control lever position degree : 115.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 14.10 Rated speed rpm : 1095 Tolerance 1/min : + 5 4.00 rack travel mm : Rated speed rpm : 1195 Tolerance 1/min : + 15 rack travel mm : 0.75
Tolerance mm : + 0.75 Rated speed rpm : 1300 LOW IDLE control lever position degree : 68.0

tolerance degree : + 4.0

position degree : 13.0

control lever

Rated speed rpm : 1140

control lever

position degree : - 1

tolerance degree	: +- 4.0	+ Check + speed 1/min : < 240
Testing:		†
Rated speed rpm rack travel mm Tolerance mm	: 6.00	FUEL DELIVERY CHARACTERISTICS
Rated speed rpm		+ Aneroid pressure + hPa : 1200 + Rated speed rpm : 700
CRT mm min.	: > 8.00	+ Del. quantity + cm3/1000 strokes : 269.5 + Tolerance
Rated speed rpm	: 400	cm3/1000 strokes : + 2.0 Check tolerance
TORQUE CONTROL		cm3/1000s. : +- 5.0
Rated speed rpm rack travel mm		+ Aneroid pressure + hPa : - + Rated speed rpm : 500
Tolerance mm		Del. quantity cm3/1000 strokes : 133.0
Rated speed rpm rack travel mm	: 15.15	Tolerance cm3/1000 strokes : + 1.0
Tolerance mm	: +- 0.05	- Check tolerance - cm3/1000S. : + 4.0 - Spreed
ANEROID/ALTITUDE COMPENSATOR TEST		Tolerance cm3/1000 strokes : 5.0 Check tolerance
SETTING		cm3/1000s. : 9.0
Rated speed rpm	: 600	<u> </u>
Pressure hPa rack travel mm	: 1200	STARTING FUEL DELIVERY
Tolerance mm	: ← 0.05	Rated speed rpm : 100 Del. quantity
Pressure hPa Rated speed rpm	: - 600	cm3/1000 strokes : 260.0 Tolerance
MEASUREMENT		+ cm3/1000 strokes : + 10.0 + Check tolerance + cm3/1000s. : + 14.0
Rated speed rpm	: 600	
Pressure hPa rack travel mm Tolerance mm	: 820 : 3.85 : + 0.15	LOW IDLE
Pressure hPa	: 500	Rated speed rpm : 300
rack travel mm Tolerance mm	: 1.30 : + 0.10	+ Del. quantity + cm3/1000 strokes : 14.0 + Tolerance
Start interlock		+ cm3/1000 strokes : + 3.0 + Check tolerance
Rated speed rpm Rated speed rpm		cm3/1000s. : +- 6.0 + Spreed + Tolerance
Check speed 1/min	: > 80	+ cm3/1000 strokes : 8.0 + Check tolerance
apecu I/MIII	••	- cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 29.01.97 Test oil : ISO 4113

Combination No. : 9 400 087 487

Injection pump

Pump designation : PES6P120A720LS7176

: (

EP type number : 0 412 726 869

Governor

Governer design. : RQV300...1050PA1142

Governer no. : 9 420 080 368

Cust. part No. :

Customer—spec. information Customer : MBB Motor : 0M447 A

Power KW : 210.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.25
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 6-2-4-1-5-

: 3

Phasing : 0-60-120-180-240

Tolerance : + 0.30

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm : 12.75 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 177.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 4.0

Tolerance cm3/1000 strokes	5.0	<pre>control lever position degree : - 1 Rated speed rpm : 1140</pre>
Check tolerance cm3/1000s.	: 9.0	Rack travel in mm : 16.50 Tolerance mm : + 1.30
Rated speed rpm	: 300	FULL LOAD DELIVERY AT FULL LOAD STO
Rack travel in m	m: 6.20	Rated speed rpm : 600
Tolerance mm	: +- 0.20	+ Aneroid pressure
Del. quantity	47.0	+ hPa : 600
cm3/1000 strokes Tolerance	13.0	+ Del. quantity + cm3/1000 strokes : 177.0
cm3/1000 strokes	: : 3.0	+ Tolerance
Check tolerance		+ cm3/1000 strokes : +- 1.0
cm3/1000s.	: +- 6.0	+ Check tolerance
Spreed		+ cm3/1000s. : +- 4.0
Tolerance cm3/1000 strokes		+ Spreed + Tolerance
Check tolerance		+ cm3/1000 strokes : 5.0
cm3/1000s.		Check tolerance
••		+ cm3/1000s. : 9.0
GUIDE SLEEVE TRA Rated speed rom		+ control lever + position degree : 59.0 + tolerance degree : ← 4.0
guide sleeve	. ,,,,,,	+ cocci ance degree 4.0
travel mm	: 7.65	control lever
Tolerance mm		+ position degree : 114.0
	: + 0.25) hala-ama dama
Rated speed rom		tolerance degree : + 4.0
•		+
guide sleeve	: 300 : 1.40	RATED SPEED : 12.00
guide sleeve travel mm	: 300	RATED SPEED rack travel mm : 12.00 Rated speed rpm : 1103
guide sleeve travel mm Tolerance mm	: 300 : 1.40 : ← 0.20	RATED SPEED : 12.00
guide sleeve travel mm Tolerance mm Rated speed rpm	: 300 : 1.40 : ← 0.20	RATED SPEED rack travel mm : 12.00 Rated speed rpm : 1103 Tolerance 1/min : + 8
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 300 : 1.40 : ← 0.20 : 500 : 3.25	RATED SPEED rack travel mm : 12.00 Rated speed rpm : 1103
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleave travel mm	: 300 : 1.40 : ← 0.20 : 500	RATED SPEED rack travel mm : 12.00 Rated speed rpm : 1103 Tolerance 1/min : + 8 rack travel mm : 4.00
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleave travel mm Tolerance mm	: 300 : 1.40 : ← 0.20 : 500 : 3.25 : ← 0.25	RATED SPEED rack travel mm : 12.00 Rated speed rpm : 1103 Tolerance 1/min : + 8 rack travel mm : 4.00 Rated speed rpm : 1185 Tolerance 1/min : + 15
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 300 : 1.40 : ← 0.20 : 500 : 3.25 : ← 0.25 : 900	RATED SPEED rack travel mm : 12.00 Rated speed rpm : 1103 Tolerance 1/min : + 8 rack travel mm : 4.00 Rated speed rpm : 1185
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleave travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: 300 : 1.40 : ← 0.20 : 500 : 3.25 : ← 0.25 : 900 : 5.85	RATED SPEED rack travel mm : 12.00 Rated speed rpm : 1103 Tolerance 1/min : + 8 rack travel mm : 4.00 Rated speed rpm : 1185 Tolerance 1/min : + 15 rack travel mm : 0.75
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleave travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: 300 : 1.40 : ← 0.20 : 500 : 3.25 : ← 0.25 : 900	RATED SPEED rack travel mm : 12.00 Rated speed rpm : 1103 Tolerance 1/min : + 8 rack travel mm : 4.00 Rated speed rpm : 1185 Tolerance 1/min : + 15 rack travel mm : 0.75 Tolerance mm : 0.75
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleave travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm Rated speed rpm	: 300 : 1.40 : ← 0.20 : 500 : 3.25 : ← 0.25 : 900 : 5.85 : ← 0.25	RATED SPEED rack travel mm : 12.00 Rated speed rpm : 1103 Tolerance 1/min : + 8 rack travel mm : 4.00 Rated speed rpm : 1185 Tolerance 1/min : + 15 rack travel mm : 0.75 Tolerance mm : 0.75
Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Rated speed rpm guide sleeve travel mm	: 300 : 1.40 : ← 0.20 : 500 : 3.25 : ← 0.25 : 900 : 5.85 : ← 0.25	RATED SPEED rack travel mm : 12.00 Rated speed rpm : 1103 Tolerance 1/min : + 8 rack travel mm : 4.00 Rated speed rpm : 1185 Tolerance 1/min : + 15 rack travel mm : 0.75 Tolerance mm : 0.75 Tolerance mm : - 0.75
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve Rated speed rpm guide sleeve	: 300 : 1.40 : ← 0.20 : 500 : 3.25 : ← 0.25 : 900 : 5.85 : ← 0.25 : 1210 : 9.55	RATED SPEED rack travel mm : 12.00 Rated speed rpm : 1103 Tolerance 1/min : + 8 rack travel mm : 4.00 Rated speed rpm : 1185 Tolerance 1/min : + 15 rack travel mm : 0.75 Tolerance mm : 0.75 Rated speed rpm : 1300
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleave travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Rated speed rpm guide sleeve travel mm	: 300 : 1.40 : ← 0.20 : 500 : 3.25 : ← 0.25 : 900 : 5.85 : ← 0.25 : 1210 : 9.55	RATED SPEED rack travel mm : 12.00 Rated speed rpm : 1103 Tolerance 1/min : + 8 rack travel mm : 4.00 Rated speed rpm : 1185 Tolerance 1/min : + 15 rack travel mm : 0.75 Tolerance mm : 0.75 Rated speed rpm : 1300
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleave travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Rated speed rpm guide sleeve travel mm	: 300 : 1.40 : ← 0.20 : 500 : 3.25 : ← 0.25 : 900 : 5.85 : ← 0.25 : 1210 : 9.55 : ← 0.25	RATED SPEED rack travel mm : 12.00 Rated speed rpm : 1103 Tolerance 1/min : + 8 rack travel mm : 4.00 Rated speed rpm : 1185 Tolerance 1/min : + 15 rack travel mm : 0.75 Tolerance mm : 0.75 Rated speed rpm : 1300

		i i		
control lever		Ī	Rated speed rpm	: > 100
position degree	: 13.0	1	Rated speed rpm	
tolerance degree	: ← 4.0	1		
		+	Check	
Testing:		†	speed 1/min	: > 80
Rated speed rpm	• 300	1	Check speed 1/min	: < 240
rack travel mm	: 6.20	I	speed minn	: \ 240
rack travel mm Tolerance mm	: ← 0.20	1		
		+	FUEL DELIVERY CHA	RACTERISTICS
Rated speed rpm	: 100	†	• • •	
CRT mm min.	. > 8.00	†	Aneroid pressure hPa	: 1000
CIX C HARRE THE FITE	. > 0.00	I	Rated speed rpm	
Rated speed rpm	: 375	1	Del. quantity	. 1050
,		1	cm3/1000 strokes	: 182.0
		 +	Tolerance	
TORQUE CONTROL		+	cm3/1000 strokes	: + 2.0
Rated speed rpm	• 400	†	Check tolerance cm3/1000s.	: +- 5.0
rack travel mm		I	UIID/ (UUU).	. +- 5.0
Tolerance mm	: + 0.05	1	Aneroid pressure	
		+	hPa	: 1000
Rated speed rpm	: 1050	+	Rated speed rpm	: 750
rack travel mm	: 13.05	†	Del. quantity	407.5
Tolerance mm	: ← 0.05	†	cm3/1000 strokes	: 186.5
Rated speed rpm	• 750	Ī	Tolerance cm3/1000 strokes	• +- 20
rack travel mm	: 13.05	Ţ	Check tolerance	. , 2.0
rack travel mm Tolerance mm	: +- 0.05	1	cm3/1000s.	: ← 5.0
		+		
ANEROID/ALTITUDE			Ameroid pressure	_
COMPENSATOR TEST		Ī	hPa Rated speed rpm	: 500
CONFERENCE TEST		I	Del. quantity	. 200
		+	cm3/1000 strokes	: 132.0
_		+	Tolerance	
2-stage LDA setti	ing	†	cm3/1000 strokes	: +- 1.0
Dated speed are	. ՀՈՈ	†	Check tolerance	
Rated speed rpm Pressure hPa	: 600 : 600	İ	cm3/1000s. Spreed	: + 4.0
cood. C iii a	. 550	Ţ	Tolerance	
MEASUREMENT		+	cm3/1000 strokes	: 5.0
		+	Check tolerance	_
Pressure hPa	: 250	†	cm3/1000s.	: 9.0
rack travel mm Tolerance mm	: -1.30 : +- 0.10	†		
TOTEL CHILCE (MI)	0.10	I		
Pressure hPa	: 380	+	STARTING FUEL DEL	IVERY
rack travel mm	: -0.40	+		
Tolerance mm	: + 0.10	+	Rated speed rpm	: 100
Pressure hPa	: 690	†	Del. quantity cm3/1000 strokes	: 210.0
rressure nra	. 070	I	Tolerance	. 210.0
Pressure hPa	: 770	1	cm3/1000 strokes	: +- 10.0
rack travel mm	: 0.30	+	Check tolerance	
Tolerance mm	: ← 0.10	+	cm3/1000s.	: +- 14.0
Canad dasambanh		†		
Start interlock		+		

LOW IDLE

300 Rated speed rpm Del. quantity cm3/1000 strokes : 13.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 29.01.97 Edition Test oil : ISO 4113

Combination No. : 9 400 087 488

Injection pump

Pump designation : PES6P120A720RS3338 EP type number : 9 400 087 089

Governor

Governer design. : RQV350...1150PA923

: K Governer no. : 9 420 030 370

Cust. part No. :

Customer-spec. information Customer : YULIN Motor : FNH 7.8L Power KW : 179.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C 40 Tolerance °C : + 2.0

Overflow valve : 2 417 413 072

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 18.0 Tolerance bar : + 1.0

Prestroke mm : 2.40 : +- 0.05 Tolerance mm Check

tolerance mm : **←** 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Tolerance : 0-60-120-180-240

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm: 13.65 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 166.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s. : +- 4.0

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Tolerance cm3/1000 strokes	: 5.0 -	Aneroid pressure	: 900
Check tolerance cm3/1000s.	: 9.0	Del. quantity cm3/1000 strokes Tolerance	: 166.0
		cm3/1000 strokes Check tolerance	: +- 1.0
Rated speed rpm	: 350	cm3/1000s. Spreed Tolerance	: +- 4.0
Rack travel in mm Tolerance mm		cm3/1000 strokes Check tolerance	: 5.0
Del. quantity cm3/1000 strokes	: 29.5	cm3/1000s.	: 9.0
Tolerance cm3/1000 strokes	: - 3.0		
	: + 5.0	CONTROL LEVER	
Spreed Tolerance	-	control lever	. (8.0
cm3/1000 strokes Check tolerance	: 5.0	position degree tolerance degree	
cm3/1000s.	: 8.0	control lever position degree	
(D) Appertus as sil	FOTTON DUME	tolerance degree	: +- 4.0
(B) SETTING OF INJ	ECTION PUMP -	PATES ARES	
WITH GOVERNOR	-	RATED SPEED	. 40 40
	-	rack travel mm	_
CUIDE OF EDITE TOATE	1	Rated speed rpm	
GUIDE SLEEVE TRAVE	-	Tolerance 1/min	: +- 5
Rated speed rpm	: 450	rack travel mm	: 4.00
guide sleeve	· +>u	Rated speed rpm	
travel mm	: 3.90	Tolerance 1/min	: +- 15
	: + 0.10 -	-	
	-	rack travel mm	: 0.50
	: 1200	Tolerance mm	: +- 0.50
guide sleeve	•	- Rated speed rpm	: 1450
travel mm	: 9.60	-	
Tolerance mm	: + 0.10	-	
	: 1000 -		
guide sleeve	-	- LOW IDLE	
	: 7.90	 	
Tolerance mm	: + 0.10		
Data and and	. 900	- control lever	. (/ 0
	: 800 -	position degree	
guide sleeve travel mm	. 6.60	tolerance degree	: +- 4.0
Tolerance mm	: + 0.20	control lever	
IOCCIGING INII	0.20	- position degree	• 14 0
Rated speed rpm guide steeve	: 350	tolerance degree	
	: 2.35	Testing:	
Tolerance mm		L resulty:	
		- Rated speed rpm	: 350 : 5.60
FULL LOAD DELIVERY	AT FULL LOAD STOP	rack travel mm Tolerance mm	: +- 0.10
Rated speed rpm	: 1150	Rated speed rpm	: 275

		4	
CRT mm min.	: > 6.90	FUEL DELIVERY CH	ADACTEDISTICS
Rated speed rpm	: 425	+	MUMOLENTOLICO
		+ Aneroid pressure	
			: 900
TORQUE CONTROL		+ Rated speed rpm	: 750
~	4450	+ Del. quantity	
Rated speed rpm	: 1150	+ cm3/1000 strokes	: 168.0
rack travel mm	: 13.65	+ Tolerance	7.0
Tolerance mm	: ← 0.05	+ cm3/1000 strokes	: : - 3.0
Rated speed rpm	: 750	+ Check tolerance + cm3/1000s.	: +- 6.0
rack travel mm	12.20	Spreed	0.0
Tolerance mm	: +- 0.10	Tolerance	
TOCCT COTICE TIME	0.10	cm3/1000 strokes	: 8.0
Rated speed rpm	: 550	Check tolerance	
rack travel mm		+ cm3/1000s.	: 12.0
Tolerance mm	: + 0.20	1 00000.	. (2.0
199 188	. 3.23	Aneroid pressure	1
		hPa	· : -
ANEROID/ALTITUDE		- Rated speed rpm	: 500
COMPENSATOR TEST		+ Del. quantity	. 500
		+ cm3/1000 strokes	: 106.5
		+ Tolerance	. 10012
SETTING		+ cm3/1000 strokes	: +- 2.0
-		+ Check tolerance	
Rated speed rpm	: 1150	+ cm3/1000s.	: +- 4.0
Pressure hPa	900	+	
rack travel mm	: 13.65	 	
Tolerance mm	: +- 0.05	+	
		+ STARTING FUEL DE	LIVERY
Pressure hPa	: -	+	
Rated speed rpm	: 1150	+ Rated speed rpm	: 100
rack travel mm	: 8.20	† rack travel mm	: 11.00
Tolerance mm	: +- 0.20	+ Tolerance mm	: +- 0.40
		+ Del. quantity	. =
MEASUREMENT		† cm3/1000 strokes	: 150.0
~	4485	+ Tolerance	
Rated speed rpm	: 1150	+ cm3/1000 strokes	: +- 20.0
D		+ Check tolerance	. 6/ 6
Pressure hPa	: 635	+ cm3/1000s.	: +- 24.0
rack travel mm	: 12.70	†	
Tolerance mm	: + 0.20	†	
Procesure http	. 745	†	
Pressure hPa	: 365	1017015	· · · · · · · · · · · · · · · · · · ·
rack travel mm	: 9.65 : + 0.05	+ LOW IDLE	
Tolerance mm	: + 0.05	t Dated aread	. 750
Start interlock		+ Rated speed rpm	: 350
Stant intentock		+ Del. quantity + cm3/1000 strokes	: 29.5
Rated speed rpm	: > 100	+ Cm3/1000 strokes + Tolerance	. 27.3
Rated speed rpm		+ cm3/1000 strokes	: +- 3.0
wared opecu (Mil)	270	Check tolerance	
Check		+ cm3/1000s.	: +- 5.0
speed 1/min	: > 80	Spreed	• • • • • • • • • • • • • • • • • • • •
Check	00	+ Tolerance	
speed 1/min	: < 310	+ cm3/1000 strokes	: 5.0
-po		+ Check tolerance	
		- cm3/1000s.	: 8.0
		1 0000.	. 0.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 29.01.97 Test oil : ISO 4113

Combination No. : 9 400 087 489

Injection pump

Pump designation : PES6P12OA72ORS3338 EP type number : 9 400 087 089

Governor

Governer design. : RQV350...1150PA923

: K

Governer no. : 9 420 080 371

Cust. part No. :

Customer-spec. information

Customer : YULIN Motor : FNH 7.8L Power KW : 156.6

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C Tolerance °C : + 2.0

Overflow valve : 2 417 413 072

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING CF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.40 Tolerance mm : + 0.05 Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240
Tolerance : +- 0.50

Check

tolerance "NW : +~ 0.75

BASIC SETTING

Rated speed rpm : 1150

Rack travel in mm : 13.55 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 159.5

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s. : +- 4.0

Spreed

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Tolerance cm3/1000 strokes	: 5.0	control lever position degree : - 1
Check tolerance cm3/1000s.	: 9.0	
		FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1150
Rated speed rpm	: 350	Aneroid pressure hPa : 900
Rack travel in mm Tolerance mm Del. quantity		Del. quantity + cm3/1000 strokes : 159.5 + Tolerance
cm3/1000 strokes Tolerance		cm3/1000 strokes : + 1.0 Check tolerance
cm3/1000 strokes Check tolerance	*	cm3/1000s. : +- 4.0 Spreed
cm3/1000S. Spreed Tolerance	; +- 5.0	Tolerance cm3/1000 strokes : 5.0 Check tolerance
cm3/1000 strokes Check tolerance		- cm3/1000s. : 9.0
cm3/1000s.	: 8.0	CONTROL LEVER
(B) SETTING OF IN. WITH GOVERNOR	JECTION PUMP	control lever position degree : 71.0
GUIDE SLEEVE TRAVE	IL .	tolerance degree : + 4.0
Rated speed rpm guide sleeve travel mm		+ control lever + position degree : 121.0 + tolerance degree : + 4.0
travel mm Tolerance mm	: 3.90 : ← 0.10	+ RATED SPEED + rack travel mm : 12.50
Rated speed rpm guide sleeve		Rated speed rpm : 1215 Tolerance 1/min : +- 5
travel mm Tolerance mm	: 9.60 : ← 0.10	+ rack travel mm : 4.00 + Rated speed rpm : 1350
Rated speed rpm guide sleeve		+ Tolerance 1/min : +- 15
travel mm Tolerance mm	: 7.90 : +- 0.10	+ rack travel mm : 0.50 + Tolerance mm : + 0.50 + Rated speed rpm : 1420
Rated speed rpm guide sieeve	: 800	Thateu speed rpiii . 1420
travel mm Tolerance mm	: 6.60 : + 0.20	LOU TO E
Rated speed rpm guide sleeve	: 350	LOW IDLE
travel mm Tolerance mm	: 2.35 : + 0.15	control lever position degree : 65.0 tolerance degree : + 4.0
GUIDE SLEEVE POSIT	TION	control lever position degree : 16.0 tolerance degree : +- 4.0

Testing:	
Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm	: 275
CRT mm min.	: > 6.70
Rated speed rpm	: 425
TORQUE CONTROL	
Rated speed rpm	: 1150_
rack travel mm Tolerance mm	: 13.55 : +- 0.05
Rated speed rpm	: 750
rack travel mm Tolerance mm	: 12.50 : + 0.10
Rated speed rpm rack travel mm	: 550 : 11.50
Tolerance mm	: + 0.20
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm	
Pressure hPa rack travel mm	: 900 : 13.55
Tolerance mm	: + 0.05
Pressure hPa	. 4450
Rated speed rpm rack travel mm	: 1150 : 3.70
Tolerance mm	: + 0.20
MEASUREMENT	
Rated speed rpm	1150
Pressure hPa	: 500
rack travel mm Tolerance mm	: 12.40 : +- 0.20
Pressure hPa rack travel mm	: 300 : 10.15
Tolerance mm	: +- 0.05
_	
Start interlock	
Start interlock Rated speed rpm	: > 100

B10

Rated speed rpm	: < 290	
Check speed 1/min Check	: > 80	
speed 1/min	: < 310	
FUEL DELIVERY CHA	ARACTERISTICS	_
Aneroid pressure hPa Rated speed rpm Del. quantity	: 900 : 750	
cm3/1000 strokes Tolerance	: 168.0	
cm3/1000 strokes	: +- 3.0	
Check tolerance cm3/1000s. Spreed	: ← 6.0	
Tolerance cm3/1000 strokes Check tolerance	: 8.0	
cm3/1000s.	: 12.0	
Aneroid pressure hPa Rated speed rpm	: - : 500	
Del. quantity cm3/1000 strokes	: 108.5	
Tolerance cm3/1000 strokes	: + 2.0	
Check tolerance cm3/1000s.	: +- 4.0	
STARTING FUEL DEL	IVERY	_
Rated speed rpm rack travel mm Tolerance mm	: 100 : 12.00 : +- 0.40	
Del. quantity cm3/1000 strokes Tolerance	: 170.0	
cm3/1000 strokes Check tolerance	: +- 20.0	
cm3/1000s.	: +- 24.0	
LOW IDLE		-
Rated speed rpm	: 350	
Del. quantity cm3/1000 strokes	: 29.5	
Tolerance cm3/1000 strokes	: +- 3.0	

Check tolerance cm3/1000s. : + 5.0

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 29.01.97 : ISO 4113

Combination No. : 9 400 087 491

Injection pump

Pump designation : PE6P120A720RS3069 EP type number : 0 411 826 712

Governor

Governer design. : RQV300...1000PA1164

Governer no. : 9 420 080 373

Cust. part No. :

Customer-spec. information

Customer : IVECO-ARGENTINA

: IVECO 8210.22 Motor

Power KW : 224.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C 40 Tolerance °C : + 2.0

Overflow valve : 2 417 413 046

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 019 assembly

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.55
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 12.55

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 208.5

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 4.0

Spreed

Tolerance cm3/1000 strokes : 5.0	+ Aneroid pressure + hPa : 600 + Del. quantity
Check tolerance cm3/1000s. : 9.0	+ cm3/1000 strokes : 208.5 + Tolerance
	+ cm3/1000 strokes : + 1.0 Check tolerance
Rated speed rpm : 300	+ cm3/1000S. : +- 4.0 + Spreed + Tolerance
Rack travel in mm : 6.00 Tolerance mm : +- 0.10	cm3/1000 strokes : 5.0 Check tolerance
Del. quantity cm3/1000 strokes : 18.0	cm3/1000s. : 9.0
Tolerance	-
cm3/1000 strokes : + 3.0 Check tolerance	CONTROL LEVER
cm3/1000s. : +- 6.0 Spreed	t control lever
Tolerance cm3/1000 strokes : 8.0	+ position degree : 63.0 + tolerance degree : ← 4.0
Check tolerance	+
cm3/1000s. : 12.0	t control lever position degree : 117.0
(B) SETTING OF INJECTION PUMP	tolerance degree : +- 4.0
WITH GOVERNOR	+ RATED SPEED + rack travel mm : 11.50
GUIDE SLEEVE TRAVEL	+ Rated speed rpm : 1045 + Tolerance 1/min : + 5
	+ 10terance 1/mm : +- 3
Rated speed rpm : 800 guide sleeve	rack travel num : 4.00 Rated speed rpm : 1140
travel mm : 5.95 Tolerance mm : +- 0.25	Tolerance 1/min : + 15
	rack travel mm : 0.50
Rated speed rpm : 1050 guide sleeve	+ Tolerance mm : + 0.50 + Rated speed rpm : 1250
travel mm : 8.70 Tolerance mm : + 0.10	<u>‡</u>
Rated speed rpm : 300 guide sleeve	LOW IDLE
travel mm : 1.35	+
Tolerance mm : +- 0.25	† + control lever
Rated speed rpm : 450 guide sleeve	<pre>position degree : 68.0 tolerance degree : + 4.0</pre>
travel mm : 2.95 Tolerance mm : + 0.25	+ control lever
Rated speed rpm : 1150	<pre>position degree : 13.0 tolerance degree : +- 4.0</pre>
guide sleeve travel mm : 10.05	Testing:
Tolerance mm : + 0.25	+ Rated speed rpm : 300
FULL LOAD DELIVERY AT FULL LOAD STOP	+ rack travel mm : 6.00 + Tolerance mm : +- 0.10
Rated speed rpm : 1000	+ Rated speed rpm : 100

CRT mm min.	: > 8.00
Rated speed rpm	: 375
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 12.55 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 500 : 12.55 : + 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 600 : 12.55 : + 0.05
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 500 : 9.80 : + 0.10
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 210 : 10.50 : + 0.10
Pressure hPa rack travel mm Tolerance mm	: 280 : 11.75 : + 0.05
Start interlock	
Rated speed rpm Rated speed rpm	: > 100 : < 220
Check speed 1/min Check	: > 80
speed 1/min	: < 240
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa	: 600

B14

Rated speed rpm Del. quantity	:		500
cm3/1000 strokes Tolerance	:		211.0
cm3/1000 strokes Check tolerance	:	+-	2.0
cm3/1000s.	:	+-	5.0
Aneroid pressure			
hPa Rated speed rpm	:		500
Del. quantity cm3/1000 strokes Tolerance	:		131.5
cm3/1000 strokes Check tolerance	:	+	1.0
cm3/1000s.	:	+	4.0

STARTING FUEL DEL	IVERY	
Rated speed rpm Del. quantity	:	100
cm3/1000 strokes Tolerance	:	200.0
cm3/1000 strokes Check tolerance	: +-	10.0
cm3/1000s.	: +-	14.0

LOW IDLE	
Rated speed rpm Del. quantity	: 300
cm3/1000 strokes	: 18.0
cm3/1000 strokes	: ← 3.0
Check tolerance cm3/1000s.	: + 6.0
Spreed Tolerance	
cm3/1000 strokes Check tolerance	: 8.0
cm3/1000s.	: 12.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 29.01.97 Test oil : ISO 4113

Combination No. : 9 400 087 492

Injection pump

Pump designation : PES6P110A120RS7214

EP type number : 0 412 716 805

Governor

Governer design. : RQV350...1100PA964

: 1K

Governer no. : 9 420 080 374

Cust. part No. : 3355823

Customer-spec. information

Customer : CUMMINS Motor : 6CTAA-290

Power KW : 220.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.40 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Tolerance : + 0.50

Check

tolerance *NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 6.00

Tolerance : \leftarrow 0.10

Check

tolerance "NW : + 0.23

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm : 13.95

Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 186.0

	+ Rated speed rpm : 1400
Tolerance	+ guide sleeve
cm3/1000 strokes : +- 1.0	+ travel mm : 10.90
	+ Tolerance mm : + 0.20
Check tolerance	
cm3/1000s. : +- 4.0	
	FULL LOAD DELIVERY AT FULL LOAD STOP
Spreed	TOLK COND DECEMENT AT TOLK COND OTO
.	+ Rated speed rpm : 900
Tolerance	+ Aneroid pressure
cm3/1000 strokes : 5.0	+ hPa : 1500
tile 1000 3t1 0/te3 . 3.0	Del. quantity
Check tolerance	+ cm3/1000 strokes : 186.0
cm3/1000s. : 9.0	+ Tolerance
CIII 7 10003 9.0	+ cm3/1000 strokes : + 1.0
•	Check tolerance
Datad anod ann + 700	+ cm3/1000s. : + 4.0
Rated speed rpm : 300	+ Spreed
9-at 4 2 / /9	† Tolerance
Rack travel in mm: 6.60	+ cm3/1000 strokes : 5.0
Tolerance mm : + 0.20	+ Check tolerance
Del. quantity	+ cm3/1000s. : 9.0
cm3/1000 strokes : 43.0	†
Tolerance	+
cm3/1000 strokes : +- 2.0	+
Check tolerance	+ CONTROL LEVER
cm3/1000s. : +- 4.0	+
Spreed	+ control lever
Tolerance	+ position degree : 116.0
cm3/1000 strokes : 8.0	+ tolerance degree : + 4.0
Check tolerance	+
cm3/1000s. : 12.0	+ RATED SPEED
	+ rack travel mm : 13.65
	+ Rated speed rpm : 1150
(B) SETTING OF INJECTION PUMP	+ Tolerance 1/min : +- 5
WITH GOVERNOR	+
	† rack travel mm : 4.00
	+ Rated speed rpm : 1345
GUIDE SLEEVE TRAVEL	+ Tolerance 1/min : +- 15
Rated speed rpm : 1200	+ rack travel mm : 0.50
guide sleeve	+ Tolerance mm : +- 0.50
travel mm : 9.10	+ Rated speed rpm : 1500
Tolerance mm : + 0.10	1300
	1
Rated speed rpm : 350	1
guide sleeve	
travel mm : 1.90	LOW IDLE
Tolerance mm : + 0.10	1
roter differming	I
Rated speed rpm : 450	control Lever
guide sleeve	+ position degree : 65.0
travel mm : 3.20	tolerance degree : +- 4.0
Tolerance mm : +- 0.20	T toterance degree 4.0
Toterarice mail . Total	Tasting
Rated speed rom : 700	+ Testing:
transfer at the second	Detect aread 200
guide sleeve	Rated speed rpm : 300
travel mm : 6.10	rack travel mm : 6.60
Tolerance mm : +- 0.20	Tolerance mm : + 0.20
	+

Rated speed rpm	: 275	+		
CRT mm min.	: > 6.50	†	FUEL DELIVERY CHA	RACTERISTICS
Rated speed rpm	: 375	-	Aneroid pressure	: 1500
TORQUE CONTROL		 ‡	Rated speed rpm Del. quantity	
Rated speed rpm rack travel mm		7	cm3/1000 strokes Tolerance	
Tolerance mm	: +- 0.05	Ŧ	cm3/1000 strokes Check tolerance	
Rated speed rpm rack travel mm		Ī	cm3/1000s. Spreed Tolerance	: +- 6.0
Tolerance mm		. }	cm3/1000 strokes Check tolerance	: 8.0
Rated speed rpm rack travel mm		1	cm3/1000s.	: 12.0
Tolerance mm		1	Aneroid pressure	: 1500
ANEROID/ALTITUDE		 }	Rated speed rpm Del. quantity	
COMPENSATOR TEST		‡	cm3/1000 strokes Tolerance	
SETTING		‡	cm3/1000 strokes Check tolerance	
Rated speed rpm Pressure hPa rack travel mm	: 1100 : 1500 : 14.65	1	cm3/1000s. Aneroid pressure hPa	: +- 6.0
Tolerance nm		1	Rated speed rpm Del. quantity	500
Pressure hPa Rated speed rpm		‡	cm3/1000 strokes Tolerance	: 104.0
rack travel mm Tolerance mm		‡	cm3/1000 strokes Check tolerance	
MEASUREMENT		‡	cm3/1000s.	: +- 4.0
Rated speed rpm	: 1100	1	STARTING FUEL DEL	TVEDY
Pressure hPa rack travel mm	: 1200 : 14.30	1	Rated speed rpm	: 100
Tolerance mm	: + 0.10	Ţ	rack travel mm Tolerance mm	: 11.20 : + 0.50
Pressure hPa rack travel nm	: 600 : 10.45	‡	Del. quantity cm3/1000 strokes	
Tolerance mm	: ← 0.05	‡	Tolerance cm3/1000 strokes	: +- 20.0
Start interlock	. 400	‡	Check tolerance cm3/1000s.	: + 25.0
Rated speed rpm Rated speed rpm	: > 100 : < 240	‡		
Check speed 1/min Check	: > 80	<u> </u>	LOW IDLE	
speed 1/min	: < 250	1	Rated speed rpm	: 300

Del. quantity		
cm3/1000 strokes	:	43.0
Tolerance		
cm3/1000 strokes	; +-	2.0
Check tolerance		
cm3/1000s.	; +-	4.0
Spreed		
Tolerance		
cm3/1000 strokes	:	8.0
Check tolerance		
cm3/1000s.	:	12.0

BOSCH INJ. PUMP TEST SPECIFICATIONS x inside diameter : 3.0 x length mm : 1000 Note remarks Refer to Service Info for test and adjustment instructions. REMARKS See microcard(s) W400/... : 29.01.97 Edition Test oil : ISO 4113 Combination No. : 9 400 087 493 (A) INJECTION PUMP SETTING VALUES Set equal delivery quant. Injection pump per values _____ Pump designation: PES6P120A720LS7114 : 0 412 726 867 EP type number BEGINNING OF DELIVERY Governor Test pressure bar : 26.0 Governer design. : RQ300/1050PA911-5 Tolerance bar : +- 1.0 : 9 420 080 375 Governer no. Prestroke mm 5.25 Cust. part No. : 0250747002 Tolerance mm : ← 0.05 Check tolerance mm : + 0.10Customer-spec. information Rack travel in mm : 10.50 Customer : +- 1.50 : OM447 LA Motor Tolerance mm : 230.0 Power KW : 6-2-4-1-5-Firing order TEST BENCH REQUIREMENTS Inlet line : 4.1 Phasing : 0-60-120-180-240 Tolerance : + - 0.50Check Test oil inlet tolerance *NW : + - 0.75temp. °C 40 Tolerance *C BASIC SETTING Overflow valve : 1 417 413 047 Rated speed rpm 600 Inlet press. bar : 1.5 Rack travel in mm: 12.40 Tolerance mm : +- 0.10 Test nozzle holde : 1 688 901 105 assembly Del. quantity cm3/1000 strokes : 195.5 Opening pressure 208.5 Tolerance bar : +- 1.5 cm3/1000 strokes : +- 1.0Tolerance bar Check tolerance : 1 680 750 067 Test lines cm3/1000s. 4.0

Spreed

Outside diameter : 6.0

Tolerance cm3/1000 strokes : 5.0	control lever position degree : 109 Rated speed rpm : 600
Check tolerance cm3/1000s. : 9.0	+ + Rack travel in mm : 20.00
	+ Tolerance mm : + 0.80
Rated speed rpm : 300	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 6.00 Tolerance mm : + 0.10	+ Rated speed rpm : 600 + Aneroid pressure
Del. quantity	+ hPa : 1050
cm3/1000 strokes : 13.5 Tolerance	Del. quantity cm3/1000 strokes : 195.5
cm3/1000 strokes : + 3.0	Tolerance
Check tolerance	- cm3/1000 strokes : + 1.0
cm3/1000s. : +- 6.0 Spreed	+ Check tolerance + cm3/1000s. : + 4.0
Tolerance	+ Spreed
cm3/1000 strokes : 8.0 Check tolerance	+ Tolerance + cm3/1000 strokes : 5.0
cm3/1000s. : 12.0	+ Check tolerance
	+ cm3/1000s. : 9.0
(B) SETTING OF INJECTION PUMP	‡
WITH GOVERNOR	CONTROL LEVER
	+
GUIDE SLEEVE TRAVEL	<pre>+ control lever + position degree : 40.0</pre>
Rated speed rpm : 1100	tolerance degree : +- 4.0
guide sleeve	+
travel mm : 6.70 Tolerance mm : +- 0.20	<pre>control lever position degree : 101.0</pre>
	tolerance degree : +- 4.0
Rated speed rpm : 300 guide sleeve	+ + RATED SPEED
travel mm : 2.95	+ rack travel mm : 11.30
Tolerance mm : + 0.15	+ Rated speed rpm : 1103
Rated speed rpm : 600	+ Tolerance 1/min : +- 8
	rack travel mm : 4.00
guide sleeve travel mm : 6.00 Tolerance mm : +- 0.10	rack travel mm : 4.00 Rated speed rpm : 1165
Toterance mm : +- U.1U	Tolerance 1/min : +- 15
Rated speed rpm : 1000	rack travel mm : 0.75
guide sleeve	Tolerance mm : + 0.75
guide sleeve travel mm : 6.40 Tolerance mm : +- 0.10	Rated speed rpm : 1300
	+
Rated speed rpm : 1175 guide sleeve	
travel mm : 9.75 Tolerance mm : + 0.25	LOW IDLE
Tolerance mm : + 0.25	<u>†</u>
	control lever
GUIDE SLEEVE POSITION	position degree : 74.0
•	+ tolerance degree : +- 4.0

		+ Check	
control lever	40.0	+ speed 1/min	: > 80
position degree	: 11.0	+ Check	
tolerance degree	: +- 4.0	+ speed 1/min	: < 240
Testing:		†	
iesting:		FUEL DELIVERY CH	ADACTEDISTICS
Rated speed rpm	• 300	I TOEL DELIVERY CHA	AKACI EKISI ICS
rack travel mm	6.00	+ Aneroid pressure	
rack travel mm Tolerance mm	: +- 0.10	+ hPa	: 1200
. 000. 41,100 11.11		+ Rated speed rpm	1050
rack travel mm	: 2.00	+ Del. quantity	. 1050
Rated speed rpm		+ cm3/1000 strokes	195.0
Tolerance 1/min	: +- 20	+ Tolerance	. ,,,,,
		+ cm3/1000 strokes	: +- 2.f
Rated speed rpm	: 100	+ Check tolerance	
1		+ cm3/1000s.	: +- 5.0
CRT mm min.	: > 9.00	Spreed	
		+ Tolerance	
			: 8.0
TORQUE CONTROL		+ Check tolerance	
		+ cm3/1000s.	: 12.0
Rated speed rpm	: 600	}	•
rack travel mm	: 12.40	+ Aneroid pressure	
Tolerance mm	: + 0.10	+ hPa	: 1200
		+ Rated speed rpm	: 750
Rated speed rpm	: 1050	+ Del. quantity	
rack travel mm Tolerance mm	: 12.40	+ cm3/1000 strokes	: 198.5
Tolerance mm	: +- 0.10	+ Tolerance	
Dakad anasal mm	. 750	+ cm3/1000 strokes	: ← 2.0
Rated speed rpm	: 750	- Check tolerance	: +- 5.0
rack travel mm Tolerance mm	12.40	+ cm3/1000s.	: ← 5.0
roterance min	0.10	+ Spreed + Tolerance	
			• 20
ANERCID/ALTITUDE		+ Check tolerance	. 0.5
COMPENSATOR TEST		+ cm3/1000s.	: 12.0
		+	
		+ Aneroid pressure	
		+ hPa	: -
2-stage LDA setti	ing	+ Rated speed rpm	: 500
		+ Del quantity	
Rated speed rpm		+ cm3/1000 strokes	: 126.0
Pressure hPa	: 1050	+ Tolerance	
		+ cm3/1000 strokes	: +- 1.0
MEASUREMENT		+ Check tolerance	
b	700	+ cm3/1000s.	: ← 4.0
Pressure hPa	: 300	+ Spreed	
rack travel mm	: -1.80	+ Tolerance	
Tolerance mm	: +- 0.10	+ cm3/1000 strokes + Check tolerance	: 5.0
Pressure hPa	: 400	+ cm3/1000s.	: 9.0
rack travel mm	: -0.90	I (110003)	: 9.0
Tolerance mm	: +- 0.10	I	
TO COT GITTEE THAT	, . 0,10		
Start interlock		STARTING FUEL DE	_IVERY
Some of the property		+	• _ •
Rated speed rpm		+ Rated speed rpm	: 100
Rated speed rpm		+ Del. quantity	
		+ cm3/1000 strokes	: 230.0
		•	

Tolerance cm3/1000 strokes : +- 10.0 Check tolerance

cm3/1000s. : \leftarrow 14.0

LOW IDLE

Rated speed rpm : 300
Del. quantity
cm3/1000 strokes : 13.5
Tolerance
cm3/1000 strokes : + 3.0
Check tolerance
cm3/1000s. : + 6.0
Spreed
Tolerance
cm3/1000 strokes : 8.0
Check tolerance
cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 29.01.97 : ISO 4113

Combination No. : 9 400 087 496

Injection pump

Pump designation : PES6P120A320/3RS3264

EP type number : 9 400 087 075

Governor

Governer design. : RQV350...1100PA1206

Governer no. : 9 420 080 378

Cust. part No. : 3355762

Customer-spec. information Customer : CUMMINS

Motor

Power KW

: 6CTA : 190.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 1 688 901 019

Opening pressure

bar

208.5

Tolerance bar

: +- 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

REMARKS

x inside diameter: 3.0 x length mm : 600

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm

3.50

Tolerance mm

: +- 0.05

Check

: +- 0.10 tolerance mm

Rack travel in mm: 10.50

Tolerance mm : +- 1.50

Firing order

: 1-5-3-6-2-

Phasing

: 0-60-120-180-240 : +- 0.50

Tolerance

Check

tolerance °NW : +- 0.75

Start of delivery blocking

*NW arter s.o.d. : 9.00

Tolerance

: + 0.10

Check

tolerance °NW

: +- 0.23

Barre! no.

: 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 10.85

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 186.0

*. l	Rated speed rpm : 1200
Tolerance cm3/1000 strokes : + 1.0	guide sleeve travel mm : 9.30 Tolerance mm : +- 0.20
Check tolerance cm3/1000S. : +- 4.0	GUIDE SLEEVE POSITION
Spreed	1 55555 55555
Tolerance cm3/1000 strokes : 5.0	control lever position degree : - 1 Rated speed rpm : 1150
Check tolerance cm3/1000s. : 9.0	Rack travel in mm: 16.50 Tolerance mm: + 1.30
Rated speed rpm : 350	FULL LOAD DELIVERY AT FULL LOAD
Reck travel in mm : 6.00	T Rated speed rpm : 1100
Tolerance mm : + 0.10 Del. quantity	+ Aneroid pressure + hPa : 1000
cm3/1000 strokes : 15.0	Del. quantity
Tolerance cm3/1000 strokes : +- 3.0	cm3/1000 strokes : 186.0 Tolerance
Check tolerance cm3/1000S. : +- 6.0	+ cm3/1000 strokes : +- 1.0 + Check tolerance
Spreed	+ cm3/1000s. : +- 4.0
Tolerance cm3/1000 strokes : 8.0	+ Spreed + Tolerance
Check tolerance : 12.0	+ cm3/1000 strokes : 5.0 + Check tolerance
	cm3/1000s. : 9.0
(B) SETTING OF INJECTION PUMP	-
WITH GOVERNOR	CONTROL LEVER
GUIDE SLEEVE TRAVEL	control lever
Rated speed rpm : 700	<pre>position degree : 60.0 tolerance degree : +- 4.0</pre>
guide sleeve travel mm : 5.05	t control lever
Tolerance mm : + 0.25	position degree : 115.0 tolerance degree : +- 4.0
Rated speed rpm : 1075 guide sleeve	RATED SPEED
travel mm : 7.60 Tolerance mm : + 0.10	rack travel mm : 9.80 Rated speed rpm : 1145
Rated speed rpm : 350	Tolerance 1/min : + 5
guide sleeve	rack travel mm : 4.00
travel mm : 1.65 Tolerance mm : + 0.25	+ Rated speed rpm : 1200 + Tolerance 1/min : +- 15
Rated speed rpm : 500	track travel mm : 0.50
guide sleeve travel mm : 3.45	Tolerance mm : +- 0.50 Rated speed rpm : 1300
Tolerance mm : + 0.25	Autou opeou i piii . 1000
	1

STOP

		+	rack travel mm	: 0.50
1.01.70.5		 +	Tolerance mm	: +- 0.10
LOW IDLE		†	Start interlock	
		I	Start Intertock	
control lever		1	Rated speed rpm	: > 100
position degree		+	Rated speed rpm	
tolerance degree	: ← 4.0	+		
		†	Check	
control lever position degree	. 15 0	†	speed 1/min Check	: > 80
tolerance degree		I	speed 1/min	: < 290
reter arrest acg. cc	+.0	1	opeca mini	. \ 2/0
Testing:		+		
	72.0	+	FUEL DELIVERY CHA	ARACTERISTICS
Rated speed rpm	: 350	. 🕇	Amana 2 d maa	
rack travel mm Tolerance mm	: 6.00 : +- 0.10	†	Aneroid pressure hPa	. 1000
local grice limit	. +- 0.10	I	Rated speed rpm	: 1000
Rated speed rpm	: 100	<u>Ţ</u>	Del. quantity	. 100
		ļ	cm3/1000 strokes	: 184.0
CRT mm min.	: > 10.00	+	Tolerance	
		+	cm3/1000 strokes	: 2.0
Rated speed rpm	: 375	+	Check tolerance	
		+	cm3/1000s.	: +- 5.0
FORQUE CONTROL		+	Amanaid massauma	
URGUE CONTROL		Ī	Aneroid pressure hPa	_
Rated speed rpm	: 1100	I	Rated speed rpm	: 500
ack travel mm		1	Del. quantity	. 500
olerance ma	: +- C.05	1	cm3/1000 strokes	: 111.5
		+	Tolerance	
ated speed rpm		+	cm3/1000 strokes	: + 1.0
ack travel mm		+	Check tolerance	
olerance mm	: + 0.05	+	cm3/1000s.	: ← 4.0
		 		
NEROID/ALTITUDE		Ţ		·
COMPENSATOR TEST		+	STARTING FUEL DEL	IVERY
		+		
OF-FEETALC		†	Rated speed rpm	: 100
SETTING		†	rack travel mm	: 20.00
Rated speed rpm	: 500	†	Tolerance mm Del. quantity	: +- 1.00
rated speed rpm Pressure hPa	: 1000	I	cm3/1000 strokes	: 280.0
ack travel mm	: 10.85	Ī	Tolerance	. 200.0
olerance mm	: +- 0.05	1	cm3/1000 strokes	: +- 10.0
	- ·	1	Check tolerance	
ressure hPa	: -	+	cm3/1000s.	: - 14.0
ated speed rpm	: 500	+		
ET A CLIDEMENT		†		
MEASUREMENT		†		
Rated speed rpm	: 500	I	LOW IDLE	
	. , ,	1		
Pressure hPa	: 600	+	Rated speed rpm	: 350
rack travel mm	: 1.55	+	Del. quantity	
Tolerance mm	: + 0.15	+	cm3/1000 strokes	: 15.0
Danning ha	. 750	†	Tolerance	70
Pressure hPa	: 350	+	cm3/1000 strokes	: ← 3.0

Check tolerance cm3/1000s. : + 6.0

Spreed

Tolerance cm3/1000 strokes : 8.0

Check tolerance cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 29.01.97 Edition : 29.01.97
Test oil : ISO 4113

Combination No. : 9 400 087 498

Injection pump

Pump designation : PES6P120A120RS3344 EP type number : 9 400 087 090

Governor

Governer design. : RQV350...1100PA1216

Governer no. : 9 420 080 380

Cust. part No. : 3355978

Customer-spec. information Customer : CUMMINS

Motor

: 6 CTAA - 250

Power KW

: 184.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

40

Tolerance °C

: 40 : + 2.0

Overflow valve : 2 417 413 076

Inlet press. bar : 3.0

Test nozzle holde

assembly

: 1 688 901 019

Opening pressure

bar

: 208.5

Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.15 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 15.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240Tolerance : + 0.50

Check

tolerance "NW : +- 0.75

Start of delivery blocking

"NW after s.o.d. : 7.50

Tolerance : + 0.10

Check

tolerance *NW : **←** 0.23

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 14.55

Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 184.5

	+	Rated speed rpm : 1400
Tolerance	+	guide sleeve
cm3/1000 strokes	: + 1.0	travel mm : 10.55 Tolerance mm : +- 0.25
Check tolerance	+	TO COT GROCE TIME
cm3/1000s.	: ← 4.0 +	CHAPT OF EACH
Spreed		GUIDE SLEEVE POSITION
·	+	
Tolerance cm3/1000 strokes	. 50	control lever position degree : - 1
FIIDY 1000 STI OKES	. 5.0	position degree : - 1 Rated speed rpm : 1150
Check tolerance	+	·
cm3/1000s.	: 9.0	Rack travel in mm : 16.50 Tolerance mm : +- 1.30
	. +	10001 41100 11111
Rated speed rpm	. 325	FULL LOAD DELIVERY AT FULL LOAD STOP
	+	TOLL LOAD DELIVERY AT FOLL LOAD STOP
Reck travel in mm		Rated speed rpm : 1100
Tolerance mm Del. quantity	: + 0.10	Aneroid pressure hPa : 1000
cm3/1000 strokes	: 44.0	Del. quantity
Tolerance	+	cm3/1000 strokes : 184.5
cm3/1000 strokes Check tolerance	: +- 3.0 +	Tolerance cm3/1000 strokes : +- 1.0
cm3/1000s.	: + 6.0	Check tolerance
Spreed	+	cm3/1000s. : + 4.0
Tolerance	+	Spreed
cm3/1000 strokes Check tolerance	: 8.0	Tolerance cm3/1000 strokes : 5.0
cm3/1000s.	: 12.0	Check tolerance
	+	cm3/1000s. : 9.0
(B) SETTING OF IN	JECTION PUMP +	
WITH GOVERNOR	+	
	<u> </u>	CONTROL LEVER
GUIDE SLEEVE TRAV	EL	control lever
man and a second second	+	position degree : 63.0
Rated speed rpm guide sleeve	: 650	tolerance degree : +- 4.0
travel mm	: 5.55	control lever
Tolerance mm	: + 0.25	position degree : 117.0
Rated speed rpm	: 1150	tolerance degree : +- 4.0
guide sleeve	Ţ	RATED SPEED
travel mm	: 8.40	rack travel mm : 13.50
Tolerance mm	: + 0.10	Rated speed rpm : 1155 Tolerance 1/min : +- 5
Rated speed rpm	: 350	Tolerance 1/min : +- 5
guide sleeve	+	rack travel mm : 4.00
travel mm	1.55	Rated speed rpm : 1350
Tolerance mm	: + 0.25	Tolerance 1/min : +- 15
Rated speed rpm	: 500	rack travel mm : 0.50
guide sleeve travel mm	. / 05	Tolerance mm : +- 0.50
Travel mm Tolerance mm	: 4.05 + : +- 0.25 +	Rated speed rpm : 1500
	+	

		† rack travel mm : 0.30
LOW IDLE		Tolerance mm : + 0.10
		Start interlock
control lever		Rated speed rpm : > 100
position degree tolerance degree	: 69.0 : + 4.0	Rated speed rpm : > 100 Rated speed rpm : < 255
to to large degree	TIU	Check
control lever		+ speed 1/min :> 80
position degree		Check
tolerance degree	: +- 4.0	+ speed 1/min : < 275
Testing:		FUEL DELIVERY CHARACTERISTICS
Rated speed rpm		+ TOLE DELIVER! CHARACTERISTICS
rack travel mm Tolerance mm		Aneroid pressure
Tolerance mm	: + 0.10	+ hPa : 1000
5	400	+ Rated speed rpm : 700
Rated speed rpm	: 100	+ Del. quantity
CUT man main	. > 0 50	+ cm3/1000 strokes : 184.0
CRT mm min.	: > 9.50	† Tolerance
Rated speed rpm	: 375	+ cm3/1000 strokes : +- 2.0 + Check tolerance
nated speed this	. 313	+ cm3/1000s. : +- 5.0
		+
TORQUE CONTROL		Aneroid pressure
		+ hPa : −
Rated speed rpm	: 1100	Rated speed rpm : 500
rack travel mm Tolerance mm	: 14.55	+ Del. quantity
iocerance mm	: ← 0.05	cm3/1000 strokes : 144.0
Rated speed rpm	: 760	+ Tolerance + cm3/1000 strokes : +- 1.0
rack travel mm		+ Check tolerance
Tolerance mm		+ cm3/1000s. : +- 4.0
		†
ANEROID/ALTITUDE		†
COMPENSATOR TEST		+ STARTING FUEL DELIVERY
		Rated speed rpm : 100
SETTING		rack travel mm : 20.00
Dahad awasal uss	. 500	+ Tolerance mm : +- 1.00
Rated speed rpm	: 500 : 1000	+ Del. quantity
Pressure hPa rack travel mm	-	+ cm3/1000 strokes : 190.0 + Tolerance
Tolerance mm		+ cm3/1000 strokes : + 10.0
	0.03	+ Check tolerance
	: -	+ Check tolerance + cm3/1000S. : + 14.0
Pressure hPa	: -	
Pressure hPa Rated speed rpm	: -	
Pressure hPa Rated speed rpm MEASUREMENT	: - : 500	cm3/1000s. : + 14.0
Pressure hPa Rated speed rpm MEASUREMENT	: - : 500	
Pressure hPa Rated speed rpm	: 500 : 500 : 680	cm3/1000s. : + 14.0
Pressure hPa Rated speed rpm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm	: 500 : 500 : 680 : 0.85	cm3/1000s. : + 14.0 LOW IDLE Rated speed rpm : 325 Del. quantity
Pressure hPe Rated speed rpm MEASUREMENT Rated speed rpm	: 500 : 500 : 680	Cm3/1000s. : + 14.0 LOW IDLE Rated speed rpm : 325 Del. quantity cm3/1000 strokes : 44.0
Pressure hPa Rated speed rpm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm	: 500 : 500 : 680 : 0.85	LOW IDLE Rated speed rpm : 325 Del. quantity

C01

Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0

Check tolerance cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 04.02.97 : ISO 4113 Test oil

Combination No. : 9 400 087 500

Injection pump

Pump designation : PES6P120A720LS7257

: 0 EP type number : 9 400 087 086

Governor

Governer design. : RQV300...950PA1242

: 9 420 080 387 Governer no.

Cust. part No. : 0260746602

Customer-spec. information

Customer

: MBB

: OM 447 LA Motor

Power KW

: 264.8

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

40 temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

: 4.65 Prestroke mm : +- 0.05 Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm: 21.00

Firing order : 6-2-4-1-5-

: 3

Phasing Tolerance : 0-60-120-180-240

: +- 0.30

Check

tolerance "NW : +- 0.50

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm: 14.25 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 275.5

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 4.0

Spreed

Tolerance

cm3/1000 strokes : 5.0

Object Actions	+	Rated speed rpm : 1120
Check tolerance cm3/1000s.	9.0	Rack travel in mm : 16.50 Tolerance mm : +- 1.30
Rated speed rpm	: 300	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm Tolerance mm	: 5.50 : + 0.10	Rated speed rpm : 600 Aneroid pressure
Del. quantity cm3/1000 strokes	: 16.5	hPa : 1300 Del. quantity
Tolerance cm3/1000 strokes	: + 3.0	cm3/1000 strokes : 275.5 Tolerance
Check tolerance cm3/1000s.	: + 6.0	cm3/1000 strokes : +- 1.0 Check tolerance
Spreed Tolerance	‡	cm3/1000s. : +- 4.0 Spreed
cm3/1000 strokes Check tolerance	+	Tolerance cm3/1000 strokes : 5.0
cm3/1000s.	: 12.0 +	Check tolerance cm3/1000s. : 9.0
(B) SETTING OF INJ WITH GOVERNOR	ECTION PUMP	CONTROL LEVER
GUIDE SLEEVE TRAVE	<u> </u>	control lever
	: 700	position degree : 52.0 tolerance degree : +- 4.0
guide sleeve travel mm	: 4.55	control lever
	: + 0.25	position degree : 117.0 tolerance degree : +- 4.0
Rated speed rpm guide sleeve	: 1050	RATED SPEED
travel mm Tolerance mm	: 7.70 + : + 0.10 +	rack travel mm : 12.60 Rated speed rpm : 1000 Tolerance 1/min : +- 5
guide sleeve	: 300	rack travel mm : 4.00
travel mm Tolerance mm	: 0.75 : +- 0.25	Rated speed rpm : 1125 Tolerance 1/min : +- 15
guide sleeve	: 500	rack travel mm : 0.50 Tolerance mm : + 0.50
travel mm Tolerance mm	: 3.45 : + 0.25	Rated speed rpm : 1230
Rated speed rpm guide sleeve	: 1165	
travel mm	: 9.55 : + 0.25	LOW IDLE
GUIDE SLEEVE POSIT	ION	control lever position degree : 82.0 tolerance degree : +- 4.0
control lever position degree	: -1	control lever position degree : 17.0

CO4

tolerance degree	: +- 4.0	+ Start interlock
Testing:		Rated speed rpm : > 100
Rated speed rpm	• 300	Rated speed rpm : < 220
rack travel mm	: 5.50	Tohank
Talanasa Ta	. 0.10	+ Check
Tolerance mm	: + 0.10	+ speed 1/min : > 80
Rated speed rpm	: 100	+ Check + speed 1/min : < 240
CRT mm min.	: > 9.20	Ī
Baka II	705	+ FUEL DELIVERY CHARACTERISTICS
Rated speed rpm	: 325	Ananaid prossume
		+ Aneroid pressure + hPa : 1300
TORQUE CONTROL		Rated speed rpm : 950
		Del. quantity
Rated speed rpm	: 600	- cm3/1000 strokes : 245.5
rack travel mm		+ Tolerance
rack travel mm Tolerance mm	: +- 0.05	+ cm3/1000 strokes : +- 2.0
ं - एक स्थापक स्थाप		Check tolerance
Rated speed rpm	: 95N	- cm3/1000s. : +- 5.0
rack travel mm	13.65	+ Spreed
rack travel mm Tolerance mm	: + 0.05	Tolerance
TOCCI GLICE MIII		cm3/1000 strokes : 8.0
Rated speed rpm	• 750	Check tolerance
mack though me	. 170 . 17. 25	
rack travel mm	. 14.65 0 05	+ cm3/1000s. : 12.0
Tolerance mm	: +- 0.05	Ananaldura
0-4-4 1	. 0/0	+ Aneroid pressure
Rated speed rpm	: 840	+ hPa : 1300
rack travel mm Tolerance mm	: 13.90	Rated speed rpm : 750
loterance mm	; 0.10	+ Del. quantity
		+ cm3/1000 strokes : 265.5
ANEROID/ALTITUDE		+ cm3/1000 strokes : + 2.0
COMPENSATOR TEST		† Check tolerance
		+ cm3/1000s. : +- 5.0
		Spreed
SETTING		+ Tolerance
		+ cm3/1000 strokes : 8.0
Rated speed rpm	: 500	+ Check tolerance
Pressure hPa	: 1300	+ cm3/1000s. : 12.0
rack travel mm	: 14.25	
Tolerance mm	: + 0.05	Aneroid pressure
	. 2.43	hPa : -
Pressure hPa	<u>.</u>	Rated speed rpm : 500
Rated speed rpm	: 500	Del. quantity
nated speed (pill	. , , , , ,	cm3/1000 strokes : 146.5
MEASUREMENT		Tolerance
HEVOOUEJIE41		cm3/1000 strokes : + 1.0
Dated anada non	: 500	+ Check tolerance
Rated speed rpm	: 500	
December 50-	. 740	
Pressure hPa	: 760	+ Spreed
rack travel mm	: 2.25	Tolerance
Tolerance mm	: + 0.15	+ cm3/1000 strokes : 5.0
.	500	+ Check tolerance
Pressure hPa	: 500	+ cm3/1000s. : 9.0
rack travel mm	: 0.90	†
Tolerance mm	: + 0.10	†
		+
		·

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 236.0

Tolerance

cm3/1000 strokes : - 10.0

Check tolerance

cm3/1000s. : + 14.0

LOW IDLE

Rated speed rpm : 300 Del. quantity

cm3/1000 strokes : 16.5

Tolerance

cm3/1000 strokes : - 3.0

Check tolerance

cm3/1000s. : +- 6.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 29.01.97 Test oil : ISO 4113

Combination No. : 9 400 087 501

Injection pump

Pump designation: PES5P120A720LS7280 EP type number : 9 400 087 087

Governor

Governer design. : RQV300...950PA1249 Governer no. : 9 420 080 389

Cust. part No. : 4750747302

Customer-spec. information Customer : MBB

Motor : OM 449 LA-EURO I

Power KW : 220.7

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C 40 Tolerance °C 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 bar Tolerance bar : +- 1.5

: 1 680 750 075 Test Lines

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm 4.65 Tolerance mm : +- 0.05 Check

tolerance mm : **←** 0.10

Rack travel in mm: 21.00

Firing order : 1-3-5-4-2

: 0-72-144-216-288 Phasing |

Tolerance : **←** 0.50

Check

tolerance °NW : + - 0.75

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 13.75 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 263.5

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 4.0

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance cm3/1000s. :	9.0	Rack travel in mm : 16.50 Tolerance mm : + 1.30	
Rated speed rpm :	300	FULL LOAD DELIVERY AT FULL LOAD STOP	_
Tolerance mm :	5.30 + 0.10	Rated speed rpm : 700 Aneroid pressure	
Del. quantity cm3/1 000 strokes : Tolerance	17.0	hPa : 1300 Del. quantity cm3/1000 strokes : 263.5	
cm3/1000 strokes : Check tolerance	+ 3.0	Tolerance cm3/1000 strokes : +- 1.0	
Spreed	+- 6.0	Check tolerance cm3/1000s. : +- 4.0	
Tolerance cm3/1000 strokes : Check tolerance	8.0	Spreed Tolerance cm3/1000 strokes : 5.0	
cm3/1000s. :	12.0	Check tolerance cm3/1000s. : 9.0	
(B) SETTING OF INJECT	TION PUMP		
		CONTROL LEVER	
GUIDE SLEEVE TRAVEL	‡	control lever position degree : 52.0	
Rated speed rpm : guide sleeve	700	tolerance degree : +- 4.0	
travel mm : Tolerance mm :	5.45 + 0.25	control lever position degree : 117.0 tolerance degree : +- 4.0	
Rated speed rpm : guide sleeve	+	RATED SPEED	
travel mm : Tolerance mm :	7.80 + 0.10	rack travel mm : 12.70 Rated speed rpm : 995 Tolerance 1/min : + 5	
Rated speed rpm : guide sieeve	300	Tolerance 1/min : +- 5 rack travel mm : 4.00	
travel mm :	0.75 +- 0.25	Rated speed rpm : 1125 Tolerance 1/min : +- 15	
Rated speed rpm : guide sleeve	500	rack travel mm : 0.50 Tolerance mm : + 0.50	
travel mm : Tolerance mm :	3.55 +- 0.25	Rated speed rpm : 1250	
Rated speed rpm : guide sleeve	1165		
travel mm : Tolerance mm :	9.45 + 0.25	LOW IDLE	
GUIDE SLEEVE POSITION	N .	control lever position degree : 83.0 tolerance degree : +- 4.0	
control lever position degree : Rated speed rpm :	- 1 1120	control lever position degree : 18.0 tolerance degree : +- 4.0	

Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 300 : 5.30 : ← 0.10
Rated speed rpm	: 100
CRT mm min.	; > 9.00
Rated speed rpm	: 325
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 700 : 13.75 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 950 : 13.75 : + 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1300 : 13.75 : + 0.05
Pressure hPa Rated speed rpm	: - : 500
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 800 : 2.85 : ← 0.15
Pressure hFa rack travel mm Tolerance mm	: 480 : 0.90 : + 0.10
Start interlock	
Rated speed rpm Rated speed rpm	: > 100 : < 220
Check speed 1/min Check	: > 80
speed 1/min	: < 240

FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	
hPa	: 1300
Rated speed rpm	: 950
Del. quantity	
cm3/1000 strokes	: 256.0
Tolerance	
cm3/1000 strokes	: +- 2.0
Check tolerance	. 2.3
cm3/1000s.	: +- 5.0
Spreed	
Tolerance	
cm3/1000 strokes	: 8.0
Check tolerance	. 0.0
cm3/1000s.	: 12.0
(10000:	• 15,6
Aneroid pressure	
hPa	• -
Rated speed rpm	: 500
Del. quantity	. 500
cm3/1000 strokes	: 121.0
Tolerance	. 121.0
cm3/1000 strokes	: 1.0
Check tolerance	. , 1.0
cm3/1000s.	: +- 4.0
Spreed	4.0
Tolerance	
cm3/1000 strokes	: 5.0
Check tolerance	
cm3/1000S.	: 9.0
0.10000	. 7.0
STARTING FUEL DEL	IVFPY
Rated speed rpm	: 100
Del. quantity	
cm3/1000 strokes	: 250.0
Tolerance	
cm3/1000 strokes	: 10.0
Check tolerance	
cm3/1000S.	: +- 14.0
LOW IDLE	
10	
Rated speed rpm	: 300
Del. quantity	
cm3/1000 strokes	: 17.0
Tolerance	- · · · •
cm3/1000 strokes	: + 3.0
cm3/1000 strokes Check tolerance	: +- 3.0
cm3/1000 strokes Check tolerance cm3/1000S.	: +- 3.0 : +- 6.0
Check tolerance	

Tolerance : 8.0 Check tolerance cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 29.01.97 Edition : ISO 4113 Test oil

Combination No. : 9 400 087 502

Injection pump

Pump designation : PES6P120A720LS7257

EP type number : 9 400 087 086

Governor

Governer design. : RQV300...950PA1262

Governer no. : 9 420 080 394

Cust. part No. : 0260749902

Customer-spec, information

Customer : MBB

: OM 447 LA Motor

Power KW : 301.6

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 bar

Tolerance bar

Test lines : 1 680 750 075

Outside diameter : 8.0 x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm : 4.65 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 21.00

: 6-2-4-1-5-Firing order

: 0-60-120-180-240 Phasing

Tolerance : +- 0.50

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm: 14.65

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 301.5

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. 4.0

Spreed

Tolerance

cm3/1000 strokes : 5.0

	†	Rated speed rpm : 1120
Check tolerance cm3/1000s.	9.0	Rack travel in mm : 16.50 Tolerance mm : +- 1.30
Rated speed rpm	: 300	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes	: + 0.10	Rated speed rpm : 600 Aneroid pressure hPa : 1400 Del. quantity
Tolerance	: + 3.0	cm3/1000 strokes : 301.5 Tolerance
Check tolerance cm3/1000s.	: + 6.0	cm3/1000 strokes : +- 1.0 Check tolerance
Spreed Tolerance	‡	cm3/1000s. : +- 4.0 Spreed
cm3/1000 strokes Check tolerance	+	Tolerance cm3/1000 strokes : 5.0
cm3/1000s.	: 12.0	Chack tolerance cm3/1000s. : 9.0
(B) SETTING OF INJ WITH GOVERNOR	ECTION PUMP	
		CONTROL LEVER
GUIDE SLEEVE TRAVE	L +	control lever position degree : 52.0
Rated speed rpm guide sleeve	: 700	tolerance degree : +- 4.0
travel mm	: 5.45 : + 0.25	control lever position degree : 118.0 tolerance degree : +- 4.0
Rated speed rpm guide sleeve	: 1050	RATED SPEED
travel mm Yolerance mm	: 7.80 : + 0.10	rack travel mm : 13.60 Rated speed rpm : 990 Tolerance 1/min : +- 5
Rated speed rpm guide sleeve	: 300	rack travel mm : 4.00
travel mm Tolerance mm	: 0.75 : + 0.25	Rated speed rpm : 1130 Tolerance 1/min : +- 15
Rated speed rpm guide sleeve	: 500	rack travel mm : 0.50 Tolerance mm : + 0.50
travel mm Tolerance mm	: 3.55 : + 0.25	Rated speed rpm : 1250
guide sleeve	: 1165	
travel mm Tolerance mm	: 9.45 : + 0.25	LOW IDLE
GUIDE SLEEVE POSIT	ION	control lever position degree : 82.0 tolerance degree : + 4.0
control lever position degree	: - 1	control lever position degree : 17.0

tolerance degree	• + 40	1
a section and acgree	• • •••	Check
Testing:		speed 1/min :> 80
Rated speed rpm	: 300	+ speed 1/min : < 240
rack travel mm	: 5.50	+
Tolerance mm	: + 0.10	
		FUEL DELIVERY CHARACTERISTICS
Rated speed rpm	: 100	Toda balancii diminio alia a
, , ,		Aneroid pressure
CRT mm min.	: > 8.50	+ hPa : 1400
		Rated speed rpm : 950
Rated speed rpm	: 325	+ Del. quantity
		+ cm3/1000 strokes : 284.5
TORQUE CONTROL		+ cm3/1000 strokes : +- 2.0
		+ Check tolerance
Rated speed rpm	: 600	+ cm3/1000s. : +- 5.0
rack travel mm	: 14.65	+ Spreed
Tolerance mm	: +- 0.05	† Tolerance
_		+ cm3/1000 strokes : 8.0
Rated speed rpm	: 950	+ Check tolerance
rack travel mm	: 14.65	+ cm3/1000s. : 12.0
Telerance mm	: 0.05	+
		+ Aneroid pressure
Rated speed rpm	: 750	+ hPa : 1490
rack travel mm	: 14.65	+ Rated speed rpm : 750
Tolerance mm	: 0.05	+ Del. quantity
		+ cm3/1000 strokes : 293.0
ANEDOTA (AL TITLINE	······································	Tolerance
ANEROID/ALTITUDE		+ cm3/1000 strokes : + 2.0
COMPENSATION TEST		+ Check tolerance
		+ cm3/1000s. : +- 5.0
SETTING		+ Spreed
OF LITING		+ Tolerance + cm3/1000 strokes : 8.0
Rated speed rpm	; 500	+ Check tolerance
Pressure hPa	: 1400	+ cm3/1000s. : 12.0
rack travel mm	: 14.65	1 12.0
Tolerance mm	: + 0.05	Aneroid pressure
· · - · · · · · · · · · · · · · · ·	J 0,07	+ hPa : -
Pressure hPa	: -	+ Rated speed rpm : 500
Rated speed rpm	500	+ Del. quantity
- 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10	· 	+ cm3/1000 strokes : 146.5
MEASUREMENT		+ Tolerance
		+ cm3/1000 strokes : + 1.0
Rated speed rpm	: 500	+ Check tolerance
		+ cm3/1000s. : +- 4.0
Pressure hPa	: 1000	+ Spreed
rack travel mm	: 2.75	+ Tolerance
Tolerance mm	: +- 0.15	+ cm3/1000 strokes : 5.0
0	4	+ Check tolerance
Pressure hPa	: 660	+ cm3/1000s. : 9.0
rack travel mm	: 1.00	†
Tolerance mm	: 0.10	†
Chart Intell		ATABANA FURNASAN
Start interlock		+ STARTING FUEL DELIVERY
Rated annual	. > 100	Dotted aread area. 100
Rated speed rpm Rated speed rpm	: > 100 : < 220	† Rated speed rpm : 100
water sheer thus	. \	T

Del. quantity

cm3/1000 strokes : 265.0

Tolerance

cm3/1000 strokes : + 10.0

Check tolerance

cm3/1000s. : +- 14.0

LOW IDLE

Rated speed rpm 300

Del. quantity cm3/1000 strokes : 17.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. : +- 6.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 05.02.97 Test oil : ISO 4113

Combination No. : 9 400 087 503

Injection pump

Pump designation : PES5P120A720LS7280 EP type number : 9 400 087 087

Governor

Governer design. : RQV300...950PA1263 Governer no. : 9 420 086 392

Cust. part No. : 0270740102

Customer-spec. information

Customer : MBB

Motor : OM 449 LA-EUROII

Power KW : 205.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.65
Tolerance mm : + 0.05
Check

tolerance mm : +- 0.10

Rack travel in mm : 21.00

Firing order : 1-3-5-4-2

Phasing : 0-72-144-216-288

Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm: 13.45

Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 253.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 4.0

Spreed

Tolerance

cm3/1000 strokes : 5.

5.0

Check tolerance cm3/1000s. : 9.0	+ Rack travel in mm : 16.50
	
Rated speed rpm : 300	full LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 5.30	Rated speed rpm : 600
Tolerance mm : +- 0.10 Del. quantity	+ Aneroid pressure + hPa : 1200
cm3/1000 strokes : 12.0	+ hPa : 1200 + Del. quantity
Tolerance	+ cm3/1000 strokes : 253.0
cm3/1000 strokes : +- 3.0 Check tolerance	+ Tolerance + cm3/1000 strokes : +- 1.0
cm3/1000s. : +- 6.0	+ Check tolerance
Spreed	+ cm3/1000s. : + 4.0
Tolerance : 8.0	+ Spreed + Tolerance
Check tolerance	+ cm3/1000 strokes : 5.0
cm3/1000s. : 12.0	+ Check tolerance + cm3/1000s. : 9.0
	T Cilip/10003 9.0
(B) SETTING OF INJECTION PUMP	+
WITH GOVERNOR	CONTROL LEVER
GUIDE SLEEVE TRAVEL	T control lever
Parada and an analysis 700	position degree : 52.0
Rated speed rpm : 700 guide sleeve	tolerance degree : +- 4.0
travel mm : 5.45	control lever
Tolerance mm : + 0.25	position degree : 117.0
Rated speed rpm : 1050	tolerance degree : +- 4.0
guide sleeve	RATED SPEED
travel mm : 7.80 Tolerance mm : +- 0.10	rack travel mm : 12.10 - Rated speed rpm : 1005
Total alite in 1	+ Tolerance 1/min : +- 5
Rated speed rpm : 300	+
guide sleeve travel mm : 0.75	+ rack travel mm : 4.00 + Rated speed rpm : 1125
Tolerance man : +- 0.25	Tolerance 1/min : + 15
	}
Rated speed rpm : 500 guide sleeve	+ rack travel mm : 0.50 + Tolerance mm : +- 0.50
travel mm : 3.55	Rated speed rpm : 1220
Tolerence mm : +- 0.25	†
Rated speed rpm : 1165	Į
guide sleeve	101 7015
travel mm : 9.45 Tolerance mm : + 0.25	LOW IDLE
roter arise mail . r = 0.25	1
CHINE OF EENE DOCUTION	- + control lever
GUIDE SLEEVE POSITION	<pre>position degree : 83.0 tolerance degree : + 4.0</pre>
control lever	T control lever
position degree : - 1	position degree : 18.0
Rated speed rpm : 1120	† tolerance degree : +- 4.0

-	+	rack travel mm	: 0.60
Testing:	İ	Tolerance mm	: +- 0.10
Rated speed rpm :	300	Start interlock	
rack travel mm : Tolerance mm :	5.30		
Tolerance mm :	+ 0.10 +	Rated speed rpm	: > 100
Detect appeal app.	100	Rated speed rpm	: < 220
Rated speed rpm :	Ī	Check	
CRT mm min. :	> 8.00	speed 1/min	: > 80
	+	Check	
Rated speed rpm :	325	speed 1/min	: < 240
TORQUE CONTROL	1	FUEL DELIVERY CHA	ARACTERISTICS
Rated speed rpm :	600	Aneroid pressure	
rack travel mm :	13.45	hPa	: 1200
Tolerance mm :	+ 0.05 +	Rated speed rpm	: 950
	+	Del. quantity	
Rated speed rpm :		cm3/1000 strokes	: 234.0
	13.15	Tolerance	
Tolerance mm :	+ 0.05	cm3/1000 strokes	: +- 2.0
Data d speed spe	000	Check tolerance	
Rated speed rpm :	17 15	cm3/1000s.	: +- 5.0
rack travel mm : Tolerance mm :	÷ 0.05	Spreed Tolerance	
ioterance man.	· 0.05	cm3/1000 strokes	
Rated speed rpm :	750	Check tolerance	. 0.0
rack travel mm :		cm3/1000s.	: 12.0
	+ 0.05		
	+	Aneroid pressure	
Rated speed rpm :	800 +	hPa	: 1200
rack travel mm :	13.50 +	Rated speed rpm	: 750
Tolerance mm :	+ 0.10 +	Del. quantity	
	+	cm3/1000 strokes	: 246.0
		Tolerance	
ANEROID/ALTITUDE	†	cm3/1000 strokes	: +- 2.0
COMPENSATOR TEST	†	Check tolerance	
	Ť	cm3/1000s. Spreed	: +- 5.0
SETTING	I	Tolerance	
3E111NG	I	cm3/1000 strokes	: 8.0
Rated speed rpm :	500	Check tolerance	. 0.0
Pressure hPa :	1200	cm3/1000s.	: 12.0
rack travel mm :	13.45		, , , , ,
Tolerance mm :	← 0.05 +	Aneroid pressure	
	+	hPa	: -
Pressure hPa :	+	Rated speed rpm	: 500
Rated speed rpm :	500 +	Del. quantity	
ALE A OLIDERATE IT	†	cm3/1000 strokes	: 143.0
MEASUREMENT	†	Tolerance @m3/1000 strokes	. + 10
Rated speed rpm :	500	Check tolerance	: +- 1.0
varen oheen (hiii :	I	cm3/1000s.	: +- 4.0
Pressure hPa :	700 I	Spreed	• • •••
rack travel mm :	1.75	Tolerance	
	+ 0.15	cm3/1000 strokes	: 5.0
्रच्चर ः रचन भाग	<u> </u>	Check tolerance	
Pressure hPa :	500	cm3/1000s.	: 9.0
	•		

C17

STARTING FUEL DELIVERY

Rated speed rpm 100

Del. quantity cm3/1000 strokes : 262.0

Tolerance

cm3/1000 strokes : +- 10.0

Check tolerance

cm3/1000s.: +- 14.0

LOW IDLE

Rated speed rpm 300

Del. quantity cm3/1000 strokes : 12.0

Tolerance

cm3/1000 strokes 3.0

Check tolerance cm3/1000s.

6.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 29.01.97 : ISO 4113

Combination No. : 9 400 087 504

Injection pump

Pump designation : PES5P120A720LS7280

EP type number : 9 400 087 087

Governor

Governer design. : RQV300...950PA1264

Governer no. : 9 420 030 393

Cust. part No. : 0270740002

Customer-spec. information

: MBB Customer

Motor

: OM 449 LA-EURO I

Power KW

: 235.4

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C

Tolerance °C

2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Test nozzle holde : 1 688 901 105

Opening pressure

208.5

Tolerance bar

: **←** 1.5

Test Lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.65

Tolerance mm Check

tolerance mm : + 0.10

Rack travel in mm : 21.00

Firing order : 1-3-5-4-2

: **←** 0.05

: 0-72-144-216-288 Phasina

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm : 14.15

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 286.5

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 4.0

Spreed

Tolerance

cm3/1000 strokes :

5.0

Check tolerance cm3/1000s. : 9.0	Rack travel in mm : 16.50 Tolerance mm : + 1.30
Rated speed rpm : 300	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 5.10 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 10.5 Tolerance cm3/1000 strokes: + 3.0 Check tolerance	Rated speed rpm : 600 Aneroid pressure hPa : 1300 Del. quantity cm3/1000 strokes : 286.5 Tolerance cm3/1000 strokes : + 1.0
cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance	Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0
cm3/1000s. : 12.0	Check tolerance cm3/1000s. : 9.0
WITH GOVERNOR	CONTROL LEVER
GUIDE SLEEVE TRAVEL	control lever position degree : 53.0
Rated speed rpm : 700 + guide sleeve + travel mm : 5.45	tolerance degree : +- 4.0 control lever
Tolerance mm : + 0.25	position degree : 118.0 tolerance degree : +- 4.0
Rated speed rpm : 1050 guide sleeve travel mm : 7.80 Tolerance mm : + 0.10	RATED SPEED rack travel mm : 12.80 Rated speed rpm : 1010
Rated speed rpm : 300 + guide sleeve + travel mm : 0.75	Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1130
Tolerance mm : + 0.25	Tolerance 1/min : +- 15
Rated speed rpm : 500 + guide sleeve + travel mm : 3.55 + Tolerance mm : + 0.25	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1220
Rated speed rpm : 1165 guide sleeve travel mm : 9.45 Tolerance mm : + 0.25	LOW IDLE
GUIDE SLEEVE POSITION	control lever position degree : 82.0 tolerance degree : +- 4.0
control lever position degree : -1 Rated speed rpm : 1120	<pre>control lever position degree : 17.0 tolerance degree : +- 4.0</pre>

Testing:		rack travel mm Tolerance mm	: 0.70 : +- 0.10
Rated speed rpm rack travel mm Tolerance mm	: 300 : 5.10	Start interlock	
		+ Rated speed rpm + Rated speed rpm	: > 100 : < 220
Rated speed rpm	: 100	Check	
CRT mm min.	: > 8.00	speed 1/min Check	: > 80
Rated speed rpm	: 325	speed 1/min	: < 240
TORQUE CONTROL		FUEL DELIVERY CHA	ARACTERISTICS
Rated speed rpm		+ Aneroid pressure	
rack travel mm	: 14.15	+ hPa	: 1300
Tolerance mm	: ← 0.05	+ Rated speed rpm + Del. quantity	: 950
Rated speed rpm	: 950	+ cm3/1000 strokes	: 264.0
rack travel mm	: 13.85	+ Tolerance	
Tolerance mm	: +- 0.05	+ cm3/1000 strokes	: +- 2.0
		+ Check tolerance	
Rated speed rpm		+ cm3/1000s.	: +- 5.0
rack travel mm	: 13.85	+ Spreed	
Tolerance mm	: +- 0.05	+ Tolerance	
	760	cm3/1000 strokes	: 8.0
Rated speed rpm		+ Check tolerance	40.0
rack travel mm		+ cm3/1000s.	: 12.0
Tolerance mm	: +- 0.05	A nancid and common	
Datad amount ass	. 900	+ Aneroid pressure	. 4700
Rated speed rpm		+ hPa	: 1300
rack travel mm Tolerance mm	: 14.15 : +- 0.05	+ Rated speed rpm	: 750
roterance min	; += 0.05	+ Del. quantity + cm3/1000 strokes	: 280.0
· · · · · · · · · · · · · · · · · · ·		Tolerance	: 200.0
ANEROID/ALTITUDE		cm3/1000 strokes	: +- 2.0
COMPENSATOR TEST		Check tolerance	2.0
CONTENDATOR TEOT		- cm3/1000s.	: ← 5.0
		Spreed	
SETTING		Tolerance	
		+ cm3/1000 strokes	: 8.0
Rated speed rpm	: 500	+ Check tolerance	·
Pressure hPa	: 1300	+ cm3/1000s.	: 12.0
rack travel mm	: 14.15	+	
Tolerance mm	: +- 0.05	+ Aneroid pressure	
		† hPa	: ~
Pressure hPa	:	+ Rated speed rpm	: 500
Rated speed rpm	: 500	+ Del. quantity	4.0.5
		+ cm3/1000 strokes	: 149.5
MEASUREMENT		† Tolerance	. 4.0
Ontal analysis	. 500	+ cm3/1000 strokes	: +- 1.0
Rated speed rpm	: 500	+ Check tolerance	
December 10-	. 0/0	+ cm3/1000s.	: +- 4.0
Pressure hPa	: 940	+ Spreed	
rack travel mm	: 2.35 : +- 0.15	+ Tolerance	: 5.0
Tolerance mm	; 0.15	cm3/1000 strokes	; 2.0
Programs LDs	. 400	+ Check tolerance + cm3/1000s.	: 9.0
Pressure hPa	: 600	T CM3/10008.	: 9.0

STARTING FUEL DELIVERY

100 Rated speed rpm Del. quantity

cm3/1000 strokes : 265.0

Tolerance

cm3/1000 strokes : + 10.0

Check tolerance cm3/1000s. : + 14.0

LOW IDLE

Rated speed rpm 300

Del. quantity

cm3/1000 strokes : 10.5

Tolerance

cm3/1000 strokes : +-3.0

Check tolerance

cm3/1000s. 6.0

Spreed

Tolerance cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 29.01.97 Test oil : ISO 4113

Combination No. : 9 400 087 505

Injection pump

Pump designation: PE6P110A720RS3289-1

EP type number : 0 411 816 795

Governor

Governer design. : RSV350...1100P1A626

Governer no. : 9 420 082 332

Cust. part No. : 1377813

Customer-spec. information Customer : SCANIA Motor : DS1192A Power KW : 186.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

bar 251.5 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm 3.35 Tolerance mm Check

tolerance mm ` : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

Phasina : 0-60-120-180-240

Tolerance : +- 0.50

Check

tolerance $^{\circ}NW$: + 0.75

Beginning of delivery differende

and maximum rack

travel 10.50 : +- 1.50 Tolerance mm 2.00 Difference * CS :

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm : 11.25

Tolerance mm : \leftarrow 0.05

Del. quantity	- Tolerance
cm3/1000 strokes : 145.0	- cm3/1000 strokes : +- 1.0
	- Check tolerance
Tolerance	- cm3/1000s. : +- 4.0
cm3/1000 strokes : +- 1.0	- Spreed
	- Tolerance
Check tolerance	- cm3/1000 strokes : 4.0
cm3/1000s. : +- 4.0	- Check tolerance
(11127 10003)	- cm3/1000s. : 7.5
Spreed	
opreed	
Tolerance	
cm3/1000 strokes : 4.0	CONTROL LEVER
CIID/ TOUD SCHOKES . 4.0	CONTROL LEVER
Charle delagance	
Check tolerance	control lever
cm3/1000s. : 7.5	position degree : 49.0
	tolerance degree : + 4.0
†	
750	control lever
Reted speed rpm : 350	- position degree : 99.0
· · · · · · · · · · · · · · · · · ·	tolerance degree : + 4.0
Rack travel in mm: 5.00	
Tolerance mm : +- 0.10	- RATED SPEED
Del. quantity	- rack travel mm : 10.20
cm3/1000 strokes : 8.5	- Rated speed rpm : 950
Tolerance	- Tolerance 1/min : +- 5
cm3/1000 strokes : + 2.5	-
Check tolerance	- rack travel mm : 4.00
cm3/1000s. : + 5.0	- Rated speed rpm : 995
Spreed	- Tolerance 1/min : +- 15
Tolerance	-
cm3/1000 strokes : 4.5	- rack travel mm : 0.85
Check tolerance	- Tolerance mm : + 0.55
cm3/1000s. : 7.5	- Rated speed rpm : 1070
	- Land of the second of the se
	_
(B) SETTING OF INJECTION PUMP	_
WITH GOVERNOR	
	- LOW IDLE
GUIDE SLEEVE POSITION	- control lever
	position degree : 74.0
<u> </u>	tolerance degree : +- 4.0
control lever	-
position degree : - 3	- control lever
Rated speed rpm : 800	position degree : 24.0
	- tolerance degree : +- 4.0
Rack travel in mm: 0.50	
Tolerance mm : + 0.20	- Setting point w/out bumper spring
	L
	- Rated speed rpm : 350
FULL LOAD DELIVERY AT FULL LOAD STOP	- rack travel mm : 4.50
TOUCH COMP PECTAGNES AT LOCK COMP STOR	- Tolerance mm : +- 0.10
Rated speed rpm : 900	
	Tooting
Aneroid pressure + 700 + 700	Testing:
=	Detail aread area 250
Del. quantity	- Rated speed rpm : 350
cm3/1000 strokes : 145.0	- rack travel mm : 5.00
†	- Tolerance mm : + 0.10

rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 430 : + 30
Rated speed rpm	: 100
CRT mm min.	: > 19.00
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 900 : 11.25 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 600 : 11.30 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 700 : 11.25 : +- G.C5
Pressure hPa Rated speed rpm	: - : 500
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerunce mm	: 200 : 1.10 : +- 0.10
Pressure hPa rack travel mm Tolerance mm	: 150 : 0.35 : + 0.05
Start interlock	
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa	: 700
Rated speed rpm Del. quantity	: 600
cm3/1000 strokes Tolerance	: 148.5

Check tolerance cm3/1000S.	: +- 5.0	
Aneroid pressure		
hPa Rated speed rpm	500	
Del. quantity cm3/1000 strokes	: 116.0	
Tolerance		
cm3/1000 strokes Check tolerance	: + 1.0	
cm3/1000s.	: +- 4.0	
_		
STARTING FUEL DEL	IVERY	
Rated speed rpm	: 100	
rack travel mm	: 20.00	
Tolerance mm	: +- 1.00	
Del. quantity		
cm3/1000 strokes	: 255.0	
Tolerance		
cm3/1000 strokes	: + 10.0	
Check tolerance		
cm3/1000s.	: + 14.0	
LOW IDLE		
O-4 - 1		
Rated speed rpm Del quantity	: 350	
Del. quantity cm3/1000 strokes		
Del. quantity cm3/1000 strokes Tolerance	: 8.5	
Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes		
Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 8.5 : ← 2.5	
Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 8.5	
Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: 8.5 : ← 2.5	
Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: 8.5 : ← 2.5 : + 5.0	
Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: 8.5 : ← 2.5	
Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	: 8.5 : ← 2.5 : + 5.0 : 4.5	
Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: 8.5 : ← 2.5 : + 5.0	
Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	: 8.5 : ← 2.5 : + 5.0 : 4.5	

Tolerance cm3/1000 strokes : +- 2.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 19.02.97 Edition : ISO 4113 Test oil

Combination No. : 9 400 087 506

Injection pump

Pump designation : PES6P120A320/3RS3365

EP type number : 9 400 087 092

Governor

Governor design. : RSV450...900P1A628

Governer no. : 9 420 082 333

Cust. part No.

Customer-spec. information Customer : CUMMINS Motor : 6CTAAG Power KW : 240.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

1.5 Inlet press. bar : Tolerance bar : - 0.1

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

rest pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 3.40 Tolerance mm

Check

: +- 0.10 tolerance mm

Rack travel in mm : 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

Tolerance : +- 0.50

Check

: **←** 0.75 tolerance "NW

Start of delivery blocking

"NW after s.o.d. : 7.50 Tolerance : +- 0.10

Check

tolerance $^{\circ}NW$: \leftarrow 0.23

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 900

Rack travel in mm: 11.85

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 262.0

	Del. quantity
Tolerance	cm3/1000 strokes : 262.0
cm3/1000 strokes : +- 1.0 +	Tolerance
+	cm3/1600 strokes : $+$ 1.0
Check tolerance +	Check tolerance
cm3/1000s. : +- 4.0 +	cm3/1000s. : +- 4.0
<u> </u>	Spreed
Spreed	Tolerance
+	cm3/1000 strokes : 5.0
Tolerance	Check tolerance
cm3/1000 strokes : 5.0	cm3/1000s. : 9.0
+	
Check tolerance	
cm3/1000s. : 9.0 +	
+	CONTROL LEVER
. †	
+	control lever
Rated speed rpm : 450 +	position degree : 59.0
D at Amount in a	tolerance degree : +- 4.0
Rack travel in mm: 4.50	
Tolerance mm : + 0.10 +	control lever
Del. quantity +	position degree : 109.0
cm3/1000 strokes : 18.0	tolerance degree : +- 4.0
Tolerance + 7.0	
cm3/1000 strokes : +- 3.0 +	ACCEMBLY CONFINION OFFETALO
Check tolerance	ASSEMBLY GOVERNOR SETTING
cm3/1000s. : +- 6.0	Data diamandiama
Spreed +	Rated speed rpm : 942
Tolerance + cm3/1000 strokes : 8.0 +	rack travel mm : 10.80
cm3/1000 strokes : 8.0 + Check tolerance +	Detail around num . 000
cm3/1000s. : 12.0	Rated speed rpm : 982 Tolerance 1/min : +- 4
Cm5/10003. : 12.0	Tolerance 1/min : +- 4 rack travel mm : 4.00
T	rack travet nan : 4.00
(B) SETTING OF INJECTION PUMP	rack travel mm : 0.50
WITH GOVERNOR	Tolerance mm : + 0.50
42111 GAREWOOK	Rated speed rpm : 1030
\perp	Nated Speed I pill 1 1000
GUIDE SLEEVE POSITION	Rated speed rpm : 943
	rack travel mm : 10.80
<u> </u>	
control lever	Rated speed rpm : 983
position degree : -3	Tolerance 1/min : + 4
Rated speed rpm : 800	rack travel mm : 4.00
1	
Rack travel in mm: 0.50	rack travel mm: : 0.50
Tolerance mm : + 0.20	Tolerance mm : +- 0.50
1	Rated speed rpm : 1030
governor spring	
pre-tension +	
click setting x : 5.75	Rated speed rpm : 944
+	rack travel mm : 10.80
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 984
+	Tolerance 1/min : + 4
Rated speed rpm : 900	rack travel mm : 4.00
Aneroid pressure	
hPa : -	rack travel mm : 0.50
+	Tolerance mm : +- 0.50
·	

Rated speed rpm : 10	30	† Tolerance mm	: - 0.
		T rack travel mm	: 2.
Rated speed rpm : 9	45	Rated speed rpm	
rack travel mm : 10	47 00		
rack travet mm : 10	.00	† Tolerance 1/min	: +-
Rated speed rpm : 9	8 5	T Poted speed and	. 100
Tolerance 1/min : +		+ Rated speed rpm	: 100
	.00	T COT am min	. > 10
rack travet min ; 4	.00	+ CRT mm min.	: > 19.
rack travel mm : 0	.50	T	
Tolerance mm : + 0		TORQUE CONTROL	
	30	T TORQUE CONTROL	
Rated speed rpm : 10	30	T Board amond and	. 000
		+ Rated speed rpm	: 900 : 11.
Datasi succed up	11	+ rack travel mm	
Rated speed rpm : 9	-	+ Tolerance mm	: + 0.
rack travel mm : 10	.80	†	
	•	+ Rated speed rpm	
Rated speed rpm : 9		+ rack travel mm	
Tolerance 1/min : +-		† Tolerance nm	: +- 0.
rack travel mm : 4	.00	+	
		+	
	.50	† Start interlock	
Tolerance mm : + 0		+	
Rated speed rpm : 10	30	<u> </u>	
		+	
Rated speed rpm : 9		+	
rack travel mm : 10	.80	+ STARTING FUEL DEL	.IVERY
Rated speed rpm : 9	87	Rated speed rpm	: 100
		rack travel mm	
rack travel mm : 4	.00	+ Tolerance mm	: + 1.
made Americal man	50	+ Del. quantity	700
rack travel mm : 0		+ cm3/1000 strokes	: 302
Tolerance mm : +- 0		+ Tolerance	
Rated speed rpm : 10	30	+ cm3/1000 strokes	: +- 10
		+ Check tolerance	
LOW IDLE		† cm3/1000s.	: +- 14
CON IVEC		Ţ	
control lever		<u> </u>	
position degree : 8	1.0	LOW IDLE	
tolerance degree : +-	4.0	-	
coto, mine and, ce i	7.0	Rated speed rpm	• 450
control lever		Del. quantity	٠ 4)
	1.0	cm3/1000 strokes	: 18
tolerance degree : +	/ O	Tolerance	. 10
total alice deglete : T	7.0	+ cm3/1000 strokes	2
Setting point w/out bumpe	r shrina	+ Check tolerance	; +- 5
detting point wroat bumpe	· op: mg	+ cm3/1000s.	: +- 6
Rated speed rpm : 450	n	Spreed	
rack travel mm : 45		Tolerance	
Tolerance mm : + 0		+ cm3/1000 strokes	: 8
TOTE OF THE CONTRACT OF THE CO	. 10	+ Check tolerance	. 0
Tooting		7/40000	. 42
Testing:		T (115/1005.	: 12
Dated aread now - 15	n	T	
Rated speed rpm : 450		T	
rack travel mm : 4	.50	+	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 29.01.97 Edition Test oil : ISO 4113

Combination No. : F 000 409 004

Injection pump

Pump designation : PES6P120A720RS3256 EP type number : 9 400 087 080

Governor

Governer design. : RQV350...1300PA1311

Governer no. : F **00**0 420 106

Cust. part No. : 0270748502

Customer-spec. information

Customer : MBB Motor

: OM 366 LA

Power KW : 139.8

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C 40 Tolerance °C

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0

Test nozzle holde

: 1 688 901 019 assembly

Opening pressure

bar 208.5 Tolerance bar : +- 1.5

Test Lines : 1 680 750 075

Outside diameter : 8.0 x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 3.05 : + - 0.05Tolerance mm

Check

tolerance mm : + 0.10

Rack travel in mm : 20.50

Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

Tolerance : +- 0.50

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 11.15

: +- 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 148.5

Tolerance

cm3/1000 strokes : +-1.0

Check tolerance

cm3/1000S.

: +-4.0

Spreed

Tolerance cm3/1000 strokes : 5.0	control lever
Check tolerance cm3/1000s. : 9.0	_ + position degree : - 1 + Rated speed rpm : 1360
	Rack travel in mm : 16.50 Tolerance mm : + 1.30
Rated speed rpm : 350	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 7.50	TOLE LOAD DELIVERY AT FOLE LOAD STOP
Tolerance mm : +- 0.10	Rated speed rpm : 1300
Del. quantity	+ Aneroid pressure
cm3/1000 strokes : 17.0	+ hPa : 900
Tolerance cm3/1000 strokes : +- 3.0	+ Del. quantity + cm3/1000 strokes : 148.5
Check tolerance	Tolerance
cm3/1000s. : +- 6.0	+ cm3/1000 strokes : + 1.0
Spreed	+ Check tolerance
Tolerance cm3/1000 strokes : 8.0	+ cm3/1000s. : ← 4.0
Check tolerance	+ Spreed + Tolerance
cm3/1000s. : 12.0	+ cm3/1000 strokes : 5.0
	+ Check tolerance
(D) SETTING OF THESETION DUMP	- cm3/1000s. : 9.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	
	+ CONTROL LEVER
GUIDE SLEEVE TRAVEL	+
Rated speed rpm : 1100	control lever position degree : 56.0
guide sleeve	tolerance degree : + 4.0
travel mm : 6.45	+
Tolerance mm : +- 0.25	+ control lever
Poted aread pur . 1750	position degree : 113.0
Rated speed rpm : 1350 guide sleeve	+ tolerance degree : +- 4.0
travel mm : 8.50	RATED SPEED
Tolerance mm : + 0.10	rack travel mm : 10.20
750	Rated speed rpm : 1355
Rated speed rpm : 350 guide sleeve	+ Tolerance 1/min : + 5
travel mm : 1.25	Track travel mm : 4.00
Tolerance mm : + 0.25	Rated speed rpm : 1460
	Tolerance 1/min : +- 15
Rated speed rpm : 650	
guide sleeve travel mm : 4.15	+ rack travel mm : 0.50 + Tolerance mm : +- 0.50
Tolerance mm : + 0.25	Rated speed rpm : 1570
	+
Rated speed rpm : 1460	+
guide sleeve	†
travel mm : 9.55 Tolerance mm : +- 0.25	LOW IDLE
GUIDE SLEEVE POSITION	T control lever
	position degree : 80.0
	+ toleranse dégree : +- 4.0

		-1	
	†	Check	
control lever	, †	speed 1/min	: > 80
position degree : 23.0	!	Check	
tolerance degree : +- 4.0	,	speed 1/min	: < 290
Tanklana	†		
Testing:	†	FILE: A EL T. (ELL)	
Natural annual a	†	FUEL DELIVERY CHA	RACTERISTICS
Rated speed rpm : 350 rack travel mm : 7.50	, †	A	
		Aneroid pressure	
Tolerance mm : \leftarrow 0.10	' †	hPa	: 900
Dated aread area . 100	Ť	Rated speed rpm	: 800
Rated speed rpm : 100	<u>†</u>	Del. quantity cm3/1000 strokes	- 12/ 0
CRT mm min. : > 10.50	, †	Tolerance	: 124.0
CRI MR MITT. : > 10.30	'	cm3/1000 strokes	
Rated speed rpm : 375	Ť		: +- 2.0
Rated Speed (pill : 3/3	· Ť	Check tolerance cm3/1000s.	: 5.0
	T	CIID/ (UUUS.	: 5.0
TORQUE CONTROL	Ī	Aneroid pressure	
· SINGE SOITINGE		hPa	• _
Rated speed rpm : 1300	1	Rated speed rpm	: 500
rack travel mm : 11.15	:	Del. quantity	. 500
Tolerance mm : + 0.05		cm3/1000 strokes	: 70.5
10(0) 41100 11111	1	Tolerance	. 10.3
Rated speed rpm : 800	<u></u>	cm3/1000 strokes	• +- 1 0
rack travel mm : 11.15	; ⊥	Check tolerance	1.0
Tolerance mm : + 0.05	1	cm3/1000s.	: +- 4.0
10(01 01 100 111111	1	Spreed	4.0
		Tolerance	
ANEROID/ALTITUDE	\perp	cm3/1000 strokes	• 50
COMPENSATOR TEST		Check tolerance	. 3.0
	1	cm3/1000s.	: 9.0
	1	· · · · · · · · · · · · · · · · · · ·	. 7.0
SETTING	1		
	1	· · · · · · · · · · · · · · · · · · ·	
Rated speed rpm : 500	\	STARTING FUEL DEL	IVERY
Pressure hPa : 900	1		
rack travel mm : 11.20) 🕹	Rated speed rpm	: 100
Tolerance mm : + 0.10		Del. quantity	
	+	cm3/1000 strokes	: 100.0
Pressure hPa : -	-	Tolerance	
Rated speed rpm : 500	+	cm3/1000 strokes	: +- 10.0
	+	Check tolerance	
MEASUREMENT	+	cm3/1000s.	: +- 14.0
	+		
Rated speed rpm : 500	†		
<u> </u>	+		
Pressure hPa : 370	. †		
rack travel mm : 0.95		LOW IDLE	
Tolerance mm : + 0.15	· †		
Dun	†	Rated speed rpm	: 350
Pressure hPa : 230	, †	Del. quantity	47.0
rack travel mm : 0.40		cm3/1000 strokes	: 17.0
Tolerance mm : +- 0.10	†	Tolerance	. 70
Ohank dahan bari	†	cm3/1000 strokes	: ← 3.0
Start interlock	†	Check tolerance	
Dated special sum - > 400	, †	cm3/1000s.	: 6.0
Rated speed rpm : > 100		Spreed	
Rated speed rpm : < 270	†	Tolerance	
	+	cm3/1000 strokes	: 8.0

cm3/1000s.	:	12.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 04.02.97 Edition Test oil : ISO 4113

Combination No. : F 000 409 102

Injection pump

Pump designation : PES6P120A720LS7257

EP type number : F 000 400 201

Governor

Governer design. : RQV300...950PA1242

Governer no. : 9 420 080 387

Cust. part No. : 0270749402

Customer-spec. information

: MBB Customer

Motor : OM 447 LA

Power KW : 264.8

TEST BENCH REQUIREMENTS

Inlet line

Test oil inlet

temp. °C Tolerance °C 2.0

: 1 417 413 047 Overflow valve

Inlet press. bar : 2.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar 208.5 Tolerance bar

Test lines : 1 680 750 075

Outside diameter : 8.0 x inside diameter: 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 4.70 Tolerance mm : +- 0.05

Check

tolerance man : +- C.10

Rack travel in mm : 21.00

Firing order : 6-2-4-1-5-

Phasing : 0-60-120-180-240

Tolerance : +- 0.30

Check

tolerance °NW : **←** 0.50

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm: 13.45

Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 271.5

Tolerance

cm3/1000 strokes : +-1.0

Check tolerance

cm3/1000s. : +-4.0

Spreed

Tolerance

cm3/1000 strokes : 5.0

	† Rated speed rpm : 1120
Check tolerance	†
cm3/1000s. : 9.0	Rack travel in mm: 16.50
	† Tolerance mm : +- 1.30
Rated speed rpm : 300	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 5.00	+ Rated speed rpm : 600
Tolerance mm : + 0.10	+ Aneroid pressure
Del. quantity	+ hPa : 1300
cm3/1000 strokes : 20.0 Tolerance	+ Del. quantity + cm3/1000 strokes : 271.5
cm3/1000 strokes : +- 3.0	Tolerance
Check tolerance	+ cm3/1000 strokes : + 1.0
cm3/1000s. : +- 6.0	+ Check tolerance
Spreed	+ cm3/1000s. : + 4.0
Tolerance	+ Spreed
cm3/1000 strokes : 8.0	† Tolerance
Check tolerance : 12.0	+ cm3/1000 strokes : 5.0 + Check tolerance
. 12.0	+ cm3/1000s. : 9.0
(B) SETTING OF INJECTION PUMP	+
WITH GOVERNOR	
	CONTROL LEVER
GUIDE SLEEVE TRAVEL	t control lever
COIDE SEEEAE WAARE	position degree : 52.0
Rated speed rpm : 700	tolerance degree : + 4.0
guide sleeve	+
travel mm : 4.55	+ control lever
Tolerance mm : ← 0.25	+ position degree : 117.0
Rated speed rpm : 1050	tolerance degree : +- 4.0
Rated speed rpm : 1050 guide sleeve	RATED SPEED
travel mm : 7.70	+ rack travel mm : 12.20
Tolerance mm : +- 0.10	+ Rated speed rpm : 1000
	+ Tolerance 1/min : + 5
Rated speed rpm : 300	+
guide sleave	+ rack travel mm : 4.00
travel mm : 0.75 Tolerance mm : +- 0.25	+ Rated speed rpm : 1125 + Tolerance 1/min : +- 15
Total affice limit . += 0.25	T Total article 17 mills . +- 13
Rated speed rpm : 500	+ rack travel mm : 0.50
guide sleeve	+ Tolerance mm : + 0.50
travel mm : 3.45	+ Rated speed rpm : 1230
Tolerance mm : + 0.25	†
Rated speed rpm : 1165	İ
guide sleeve	
travel mm : 9.55	+ LOW IDLE
Tolerance mm : + 0.25	+
	†
	+ control lever
GUIDE SLEEVE POSITION	position degree : 81.0
	tolerance degree : + 4.0
control lever	T control lever
position degree : - 1	position degree : 16.0
Programme and the second secon	The state of the s

tolerance degree	: +- 4.0	† Start interlock
Testing:		Rated speed rpm : > 100 Rated speed rpm : < 220
Rated speed rpm	: 300	T Rateu speed Phil : < 220
rack travel mm	: 5.00	Check
rack travel mm Tolerance mm	: ← 0.10	+ speed 1/min : > 80
Rated speed rpm	: 100	+ Check + speed 1/min : < 240
CRT mm min.	: > 8.00	FILE DEL TUEDV CHADACTEDIOTICO
Rated speed rpm	: 325	+ FUEL DELIVERY CHARACTERISTICS +
		+ Aneroid pressure
TORQUE CONTROL		† hPa : 1300
TORQUE CONTROL		+ Rated speed rpm : 950 + Del. quantity
Rated speed rpm	• 600	+ cm3/1000 strokes : 250.0
rack travel mm	13.45	Tolerance
Tolerance mm	: +- 0.05	+ cm3/1000 strokes : +- 2.0
	· 0.02	+ Check tolerance
Rated speed rpm	: 950	+ cm3/1000\$. : + 5.0
rack travel mm	: 13.15	+ Spreed
Tolerance mm	: ← 0.05	+ Tolerance
		+ cm3/1000 strokes : 8.0
Rated speed rpm	: 750	+ Check tolerance
rack travel mm	: 13.45	+ cm3/1000S. : 12.0
rack travel mm Tolerance mm	: ← Q.Q5	†
.	200	+ Aneroid pressure
Rated speed rpm	: 950	+ hPa : 1300
rack travel mm		Rated speed rpm : 750
Tolerance mm	: 1 0.05	+ Del. quantity
		+ cm3/1000 strokes : 265.0 + Tolerance
ANEROID/ALTITUDE		
COMPENSATOR TEST		+ Check tolerance
OOM ENDATOR TEOT		+ cm3/1000s. : +- 5.0
		+ Spreed
SETTING		Tolerance
		+ cm3/1000 strokes : 8.0
Rated speed rpm		+ Check tolerance
Pressure hPa		+ cm3/1000s. : 12.0
rack travel mm		†
Tolerance mm	: ← 0.05	+ Aneroid pressure
Onessune hos		hPa : -
Pressure hPa Rated speed rpm	: 500	Rated speed rpm : 500
katen sheed thui	: 200	+ Del. quantity + cm3/1000 strokes : 143.5
MEASUREMENT		Tolerance
TEAUGNETER		+ cm3/1000 strokes : +- 1.0
Rated speed rpm	: 500	+ Check tolerance
		+ cm3/1000s. : +- 4.0
Pressure hPa	: 850	Spreed
rack travel mm		+ Tolerance
Tolerance mm		+ cm3/1000 strokes : 5.0
	_	+ Check tolerance
Pressure hPa	: 550	+ cm3/1000s. : 9.0
rack travel mm	: 0.90	†
Tolerance mm	: ← 0.10	†
		+

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 240.0

Tolerance

cm3/1000 strokes : \leftarrow 10.0

Check tolerance

cm3/1000s. : +- 14.0

LOW IDLE

Rated speed rpm : 300

Del. quantity

cm3/1000 strokes : 20.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. : +- 6.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 25,02,97

Test oil

: ISO 4113

Combination No. : F 000 409 200

Injection pump

Pump designation : PES4A95D410RS2774

EP type number : 9 400 084 019

Governor

Governer design. : RQV300...1300AB1321L

Governer no. : F 000 420 300

Cust. part No. : 0270745902

Customer-spec. information

Customer

: MBB

Motor

: OM 364 A

Power KW

: 85.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C

40

Tolerance °C

2.0

Overflow valve

: 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar

173.5

Tolerance bar

: +- 1.5

Test lines

: 1 680 750 015

Outside diameter :

6.0

x inside diameter :

3.0

x length mm :

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar :

Tolerance bar : + 1.0

Prestroke mm 3.25 : +- 0.05

Tolerance mm Check

tolerance mm : +- C.10

Rack travel in mm: 10.50

Tolerance mm : \leftarrow 1.50

Firing order : 1-3-4-2

: 0-90-180-270 Phasing

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm: 10.35

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes :

86.5

Tolerance

cm3/1000 strokes : +-1.0

Check tolerance

cm3/1000s.

3.0

Spreed

Tolerance

cm3/1000 strokes :

3.5

Check tolerance

cm3/1000s.

8.0

	+ Rated speed rpm : 1300
	+ Aneroid pressure + hPa : 700
Rated speed rpm : 300	Del. quantity cm3/1000 strokes : 86.5
Rack travel in mm: 7.00	+ Tolerance
Tolerance mm : +- 0.10 Del. quantity	+ cm3/1000 strokes : +- 1.0 + Check tolerance
cm3/1000 strokes : 10.0	- cm3/1000s. : +- 3.0
Tolerance cm3/1000 strokes : +- 2.0	+ Spreed + Tolerance
Check tolerance	+ cm3/1000 strokes : 3.5
cm3/1000S. : +- 4.5 Spreed	+ Check tolerance + cm3/1000s. : 8.0
Tolerance	. 0.0
cm3/1000 strokes : 5.5 Check tolerance	<u> </u>
cm3/1000s. : 9.0	CONTROL LEVER
(D) OFFILM OF THEFTICE NAME	t control lever
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	<pre>position degree : 59.0 tolerance degree : +- 4.0</pre>
	— + control lever
GUIDE SLEEVE TRAVEL	position degree : 108.0
Rated speed rpm : 1500	tolerance degree : + 4.0
guide sleeve	RATED SPEED
travel mm : 8.55 Tolerance mm : + 0.05	+ rack travel mm : 9.30 + Rated speed rpm : 1365
	Tolerance 1/min : + 5
Rated speed rpm : 300 guide sleeve	+ + rack travel mm : 4.00
travel mm : 1.05	Rated speed rpm : 1485
Tolerance man : + 0.25	Tolerance 1/min : ← 15
Rated speed rpm : 500	rack travel mm : 0.50
guide sleeve travel mm : 2.55	+ Tolerance mm : +- 0.50 + Rated speed rpm : 1640
Tolerance mm : + 0.25	+
Rated speed rpm : 750	-
guide sleeve travel mm : 4.20	LOW IDLE
Tolerance mm : + 0.10	T EOW IDEE
	‡ control lever
GUIDE SLEEVE POSITION	position degree : 68.0
	+ tolerance degree : +- 4.0
control lever	control lever
position degree : - 1 Rated speed rpm : 1500	<pre>position degree : 19.0 tolerance degree : +- 4.0</pre>
	+
Rack travel in mm : 16.50 Tolerance mm : + 1.30	† Testing:
	Rated speed rpm : 300
FULL LOAD DELIVERY AT FULL LOAD STOP	- + rack travel mm : 7.00 + Tolerance mm : + 0.10

Rated speed rpm : 100 CRT mm min. : > 8.00 Rated speed rpm : 485 TORQUE CONTROL Rated speed rpm 1300 rack travel mm 10.35 Tolerance mm : +- 0.05 Rated speed rpm 800 : rack travel mm 10.35 Tolerance mm : +- 0.05 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm 500 Pressure hPa 700 rack travel mm 10.35 Tolerance mm : **←** 0.05 Pressure hPa Rated speed rom: : 500 **MEASUREMENT** Rated speed rpm 500 Pressure hPa 300 rack travel mm 0.55 Tolerance mm : +- 0.05 Start interlock 100 Rated speed rpm : > Rated speed rpm : < 220 Check speed 1/min : > 80 Check speed 1/min : < 240 FUEL DELIVERY CHARACTERISTICS Aneroid pressure 700 hPa

Check tolerance cm3/1000s. : +- 4.0 Aneroid pressure Rated speed rpm 500 Del. quantity cm3/1000 strokes : 53.0 Tolerance cm3/1000 strokes : \leftarrow 1.0 Check tolerance cm3/1000s.: +-3.0 STARTING FUEL DELIVERY Rated speed rpm 100 rack travel mm 13.30 : : **←** 0.10 Tolerance num Del. quantity cm3/1000 strokes : 84.0 Tolerance cm3/1000 strokes : \leftarrow 6.0 LOW IDLE Rated speed rpm : 300 Del. quantity cm3/1000 strokes : 10.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 4.5 Spreed Tolerance cm3/1000 strokes : 5.5 Check tolerance cm3/1000s. 9.0

End of test specification sheet

hPa : 700 Rated speed rpm : 800 Del. quantity

cm3/1000 strokes : 77.5

Tolerance

cm3/1000 strokes : +- 2.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 20.02.97 Test oil : ISO 4113

Combination No. : F 000 409 201

Injection pump

Pump designation : PES6A95D41ORS2918 EP type number : F 000 400 400

Governor

Governer design. : RQV300...1300AB1324

Governer no. : F 000 420 301

Cust. part No. : 3760747202

Customer—spec. information Customer : MBB Motor : OM 366 A Power KW : 125.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.05
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 11.25 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 81.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

Tolerance

cm3/1000 strokes : 3.5

0.5

Check tolerance cm3/1000s. : 8.0	†
cm3/1000s. : 8.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm : 300	Rated speed rpm : 1300 Aneroid pressure
Rack travel in mm: 9.20	hPa : 800 Del. quantity
Tolerance mm : + 0.10 Del. quantity	cm3/1000 strokes : 81.0 Tolerance
cm3/1000 strokes : 19.0 Tolerance	cm3/1000 strokes : + 1.0 Check tolerance
cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 4.5	- cm3/1000s. : +- 3.0 - Spreed
Spreed Tolerance	Tolerance cm3/1000 strokes : 3.5 Check tolerance
cm3/1000 strokes : 5.5 Check tolerance	cm3/1000s. : 8.0
cm3/1000s. : 9.0	+
(B) SETTING OF INJECTION PUMP	CONTROL LEVER
WITH GOVERNOR	control lever position degree : 58.0
GUIDE SLEEVE TRAVEL	tolerance degree : + 4.0 control lever
Rated speed rpm : 1500 guide sleeve	position degree : 111.0 tolerance degree : +- 4.0
travel mm : 8.95 Tolerance mm : + 0.05	+ RATED SPEED + rack travel mm : 10.20
Rated speed rpm : 300 guide sleeve	Rated speed rpm : 1365 Tolerance 1/min : +- 5
travel mm : 1.05 Tolerance mm : + 0.25	rack travel mm : 4.00
Rated speed rpm : 500	+ Rated speed rpm : 1505 + Tolerance 1/min : +- 15
guide sleeve cravel mm : 2.55 Tolerance mm : +- 0.25	rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1640
Rated speed rpm : 750 guide sleeve	‡
travel mm : 4.65 Tolerance mm : + 0.10	
GUIDE SLEEVE POSITION	+
control lever	control lever position degree : 76.0 tolerance degree : +- 4.0
position degree : - 1 Rated speed rpm : 1500	control lever position degree : 20.0
Rack travel in mm : 16.50 Tolerance mm : +- 1.30	tolerance degree : +- 4.0 Testing:

Rated speed rpm	: 300	1
rack travel mm	; 9.20	- Check
Tolerance mm	· + 0.10	
to fetalitie inti	; +- U.10	+ speed 1/min :> 80 + Check
Rated speed rpm	: 100	1
vared speed this	. 100	+ speed 1/min : < 260
CRT mm min.	. > 0.00	T
CRI min metti.	; > 9.00	ELIEL DEL TVEDY CHADACTEDICITICO
Rated speed rpm	. 505	FUEL DELIVERY CHARACTERISTICS
vared speed thii	; , , , , ,	T Anonoid pressure
		+ Aneroid pressure + hPa : 800
TORQUE CONTROL		_
TORROL CONTROL		+ Rated speed rpm : 800 + Del. quantity
Rated speed rpm	. 1300	+ cm3/1000 strokes : 81.0
rack traval mm	: 11,25	+ Tolerance
rack travel mm Tolerance mm	: + 0.05	+ cm3/1000 strokes : +- 2.0
Ocerance (IIII)	, . 0,0	+ Check tolerance
Rated speed rpm	. 750	7.4.000
rack travel mm	. 12 05	+ cm3/1000S. : + 4.0 + Spreed
Tolerance mm		+ Tolerance
OCCIDICC (III)	. ' ' ' ' '	+ cm3/1000 strokes : 5.0
Pated cheed and	• 050	+ Check tolerance
Rated speed rpm	: 950	
rack travel mm Tolerance mm	: 11.50 : +- G.05	± cm3/1000s. : 8.0
ioterance mai	נט.ט די :	T Anonorid programs
Pated speed rom	• 800	+ Aneroid pressure + hPa : -
Rated speed rpm rack travel mm Tolerance mm	12.05	Rated speed rpm : 500
Tolerance me	. 12.05	+ Del. quantity
TOTE PARICE HAIR	· — U.D	+ cm3/1000 strokes : 42.5
		Tolerance
ANEROID/ALTITUDE		- cm3/1000 strokes : +- 1.0
COMPENSATOR TEST		+ Check tolerance
COM ENDATOR TEST		- cm3/1000s. : +- 3.0
		- Spreed
SETTING		+ Tolerance
00111110		- cm3/1000 strokes : 3.5
Rated speed rpm	: 500	+ Check tolerance
Pressure hPa	: 800	- cm3/1000s. : 8.0
rack travel mm	: 12.00	10000.
Tolerance man	: +- 0.05	
	0.05	
Pressure hPa	• -	+ STARTING FUEL DELIVERY
Rated speed rpm	500	The roll bettack!
TOO SPOOM INII	. 500	Arated speed rpm : 100
MEASUREMENT		rack travel mm : 13.50
		+ Tolerance num : +- 0.10
Rated speed rpm	: 500	+ Del. quantity
		+ cm3/1000 strokes : 78.0
Pressure hPa	: 550	+ Tolerance
rack travel mm	: 1.80	+ cm3/1000 strokes : + 7.5
Tolerance mm	: +- 0.10	- Check tolerance
		+ cm3/1000s. : + 10.0
Pressure hPa	: 350	+
rack travel mm	: 0.80	
Tolerance mm		+
**************************************	- - • • •	<u> </u>
Start interlock		LOW IDLE
		1
Rated speed rpm	: > 100	+ Rated speed rpm : 300
Rated speed rpm		+
······································		1

Del. quantity cm3/1000 strokes	:	19.0	
Tolerance cm3/1000 strokes Check tolerance	: +-	2.0	
cm3/1000s.	: +-	4.5	
Tolerance cm3/1000 strokes	:	5.5	
Check tolerance cm3/1000s.	:	9.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 21.03.97 Test oil : ISO 4113

Combination No. : 9 400 085 393

Injection pump

Pump designation : PES4A95D410RS2887 EP type number : 9 400 084 040

Governor

Governer design. : RQV300...1300AB1311L

Governer no. : 9 420 080 390

Cust. part No. : 0260746802

Customer-spec. information

Customer : MBB

Motor : OM 364 LA/EURO I

Power KW : 100.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 3.00 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 12.45
Tolerance mm : + 0.05

Del. quantity

cm3/1G00 strokes : 99.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

Tolerance

cm3/1000 strokes : 3.5

Check tolerance

cm3/1000s : 8.0

	+ Rated speed rpm : 1300
	+ Aneroid pressure + hPa : 700
Rated speed rpm : 300	Del. quantity cm3/1000 strokes : 99.0
Rack travel in mm: 8.30	† Tolerance
Tolerance mm : + 0.10	+ cm3/1000 strokes : + 1.0
Del. quantity cm3/1000 strokes : 12.0 Tolerance	+ Check tolerance - cm3/1000s. : + 3.0
cm3/1000 strokes : +- 2.0	+ Spreed + Tolerance
Check tolerance	+ cm3/1000 strokes : 3.5
cm3/1000s. : + 4.5	+ Check tolerance
Spreed Toler a nce	+ cm3/1000s. : 8.0
cm3/1000 strokes : 5.5	Ī
Check tolerance	
cm3/1000s. : 9.0	CONTROL LEVER
	control lever
(B) SETTING OF INJECTION PUMP	position degree : 62.0
WITH GOVERNOR	tolerance degree : + 4.0
	t control lever
GUIDE SLEEVE TRAVEL	position degree : 111.0
	tolerance degree : +- 4.0
Rated speed rpm : 1500	† name one
guide sleeve travel mm : 8.55	+ RATED SPEED + rack travel mm : 11.40
Tolerance ma : + 0.05	
	+ Tolerance 1/min : + 5
Rated speed rpm : 300	+
guide sleeve	rack travel mm : 4.00
travel mm : 1.05 Tolerance mm : +- 0.25	+ Rated speed rpm : 1515 Tolerance 1/min : +- 15
TO COT CATAGO INTA	+ Total anse Printing : 1
Rated speed rpm : 500	rack travel mm : 0.50
guide sleeve	+ Tolerance mm : + 0.50
travel mm : 2.55 Tolerance mm : + 0.25	Rated speed rpm : 1640
Total artice limit . 1- 0.65	I
Rated speed rpm : 750 guide sleeve	
travel mm : 4.20	+ LOW IDLE
Tolerance mm : +- 0.10	†
	† control loves
GUIDE SLEEVE POSITION	<pre>control lever position degree : 73.0</pre>
GOIDE OFFERE CONTINUE	tolerance degree : + 4.0
	+
control lever	+ control lever
position degree : -1	+ position degree : 22.0
Rated speed rpm : 1500	tolerance degree : +- 4.0
Rack travel in mm : 16.50 Tolerance mm : +- 1.30	Testing:
Transfer with the contract of	+ Rated speed rpm : 300
	+ rack travel mm : 8.30
FULL LOAD DELIVERY AT FULL LOAD STOP	+ Tolerance mm : + 0.10
	†

Rated speed rpm	: 100	+ Check
CRT mm min.	: > 10.20	+ speed 1/min : < 260
Rated speed rpm	: 415	FUEL DELIVERY CHARACTERISTICS
TORQUE CONTROL		Aneroid pressure hPa : 700
Rated speed rpm	: 1300	+ Rated speed rpm : 800 + Del. quantity
rack travel mm	: 12.45	+ cm3/1000 strokes : 95.0
Tolerance mm	: ← 0.05	+ Tolerance + cm3/1000 strokes : +- 2.0
Rated speed rpm	: 800	Check tolerance
rack travel mm	: 12.85	+ cm3/1000s. : +- 4.0
Tolerance mm	: ← 0.05	+ Spreed
Rated speed rpm	: 1050	+ Tolerance + cm3/1000 strokes : 5.0
rack travel mm		Check tolerance
Tolerance mm	: ← 0.05	+ cm3/1000s. : 8.0
Rated speed rpm	. 900	Aneroid pressure
rack travel mm	12.60	+ hPa : -
rack travel mm Tolerance mm	: 0.05	- Rated speed rpm : 500
		+ Del. quantity
ANEROID/ALTITUDE		- + cm3/1000 strokes : 45.0 + Tolerance
COMPENSATOR TEST		+ cm3/1000 strokes : +- 1.0
		+ Check tolerance
		- cm3/1000s. : +- 3.0
SETTING		+ Spreed
Rated speed rpm	: 500	+ Tolerance + cm3/1000 strokes : 3.5
Pressure hPa	700	+ Check tolerance
rack travel mm		- - cm3/1000s. : 8.0
Tolerance mm	: +- 0.05	†
Pressure hPa	: -	
Rated speed rpm	: 500	STARTING FUEL DELIVERY
MEASUREMENT		- Rated speed rpm : 100
TEAGORETICAT		rack travel mm : 13.70
Rated speed rpm	: 500	+ Tolerance mm : +- 0.10
D	200	+ Del. quantity
Pressure hPa rack travel mm	: 200 : 0.85	+ cm3/1000 strokes : 75.0 + Tolerance
Tolerance mm	: + 0.05	- cm3/1000 strokes : +- 7.5
. O (C) G. 100 Man		+ Check tolerance
Pressure hPa	: 400	+ cm3/1000s. : +- 10.0
rack travel mm	: 2.10	†
Tolerance mm	: ← 0.10	1
Start interlock		
	. 400	LOW IDLE
Rated speed rpm		+ Rated speed rpm : 300
Rated speed rpm	; > 250	+ Rated speed rpm : 300 + Del. quantity
Check		+ cm3/1000 strokes : 12.0
speed 1/min	: > 80	† Tolerance
		+ cm3/1000 strokes : +- 2.0

Check tolerance cm3/1000s. : **←** 4.5 Spreed Tolerance cm3/1000 strokes : 5.5

Check tolerance cm3/1000s. 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 26.03.97 : ISO 4113

Combination No. : 9 400 087 436

Injection pump

Pump designation : PE6P110A320RS3108V

EP type number

: 0 411 816 737

Governor

Governer design. : RQV250...1100PA1120

Governer no.

: 9 420 080 364

Cust. part No.

: 8133051

Customer-spec. information

Customer : VOLVO-TRUCK

Motor

: THD 101 KC

Power KW

: 228.0

TEST BENCH REQUIREMENTS

Inlet line

: 3.1

Test oil inlet

temp. °C

Tolerance *C

Overflow valve

: 1 417 413 025

Inlet press. bar :

1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar

173.5

Tolerance bar

: +- 1.5

Test lines

: 1 680 750 015

Outside diameter :

6.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : +-

1.0

Prestroke mm

3.05

: + - 0.05Tolerance mm

Check

tolerance mm

: + - 0.10

Rack travel in mm: 10.50

Tolerance mm : +- 1.50

Firing order

: 1-5-3-6-2-

: 4

Phasing

: 0-60-120-180-240

Tolerance

: - 0.50

Check

tolerance *NW

: + - 0.75

BASIC SETTING

Rated speed rpm :

700

Rack travel in mm : 13.75

Tolerance mm

: +- 0.05

Del. quantity

cm3/1000 strokes : 181.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s.

: +- 4.0

Spreed

Tolerance cm3/1000 strokes : 4.0	control lever position degree : - 1
Check tolerance cm3/1000s. : 7.5	Rated speed rpm : 1175
 ‡	Rack travel in mm : 16.50 Tolerance mm : + 1.30
Rated speed rpm : 250	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 5.40 Tolerance mm: + 0.10	Rated speed rpm : 700
Del. quantity + cm3/1000 strokes : 32.0 +	Aneroid pressure hPa : 1200
Tolerance cm3/1000 strokes : + 2.5	Del. quantity cm3/1000 strokes : 181.0
Check tolerance cm3/1000s. : + 5.0 + Spreed	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Tolerance cm3/1000 strokes : 4.5	cm3/1000s. : +- 4.0 Spreed
Check tolerance cm3/1000s. : 7.5	Tolerance cm3/1000 strokes : 4.0
} +	Check tolerance cm3/1000s. : 7.5
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	
GUIDE SLEEVE TRAVEL	CONTROL LEVER
Rated speed rpm : 950	<pre>control lever position degree : 65.0 tolerance degree : +- 4.0</pre>
travel mm : 6.50 + U.20 + U.20	control lever
Rated speed rpm : 250	position degree : 119.0 tolerance degree : +- 4.0
guide sleeve travel mm : 1.20 + Tolerance mm : +- 0.10	RATED SPEED rack travel mm : 12.70
Rated speed rpm : 500	Rated speed rpm : 1165 Tolerance 1/min : +- 5
travel mm : 4.50 Tolerance mm : +- 0.40	rack travel mm : 4.00 Rated speed rpm : 1255 Tolerance 1/min : +- 15
Rated speed rpm : 700	rack travel mm : 0.50
travel mm : 6.50 Tolerance mm : + 0.20	Tolerance mm : +- 0.50 Rated speed rpm : 1350
Rated speed rpm : 1100 # # guide sleeve # #	
travel mm : 7.25 Tolerance mm : + 0.25	LOW IDLE
GUIDE SLEEVE POSITION	control lever position degree : 64.0 tolerance degree : + 4.0

11.0 + 4.0 250 5.40 + 0.10 2.00 375 + 30 100 > 6.80 700 13.75 + 0.05
5.40 +- 0.10 2.00 375 +- 30 100 > 6.80
5.40 +- 0.10 2.00 375 +- 30 100 > 6.80
700 13.75 + 30 100 > 6.80
> 6.80 700 13.75
700 13.75
13.75
13.75
500 1200 13.75 +- 0.05
500
500
750 3.45 +- 0.05
300 0.85 +- 0.15

Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: - : 700 : 107.0 : + 1.0 : + 4.0
STARTING FUEL DEL	IVERY
Rated speed rpm	: 100
rack travel mm	: 20.50
Tolerance mm	: +- 0.50
Del. quantity	
cm3/1000 strokes	: 170.0
Tolerance	
cm3/1000 strokes	: +- 10.0
Check tolerance	
cm3/1000s.	: +- 14.0
LOW IDLE	
Rated speed rpm Del. quantity	: 250
cm3/1000 strokes Tolerance	: 32.0
cm3/1000 strokes Check tolerance	: ← 2.5
cm3/1000s. Spreed	: +- 5.0
Tolerance	
cm3/1000 strokes	: 4.5
Check tolerance cm3/1000s.	: 7.5
End of test speci	fication sheet

FUEL DELIVERY CHARACTERISTICS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 26.03.97 Test oil : ISO 4113

Combination No. : 9 400 087 437

Injection pump

Pump designation : PE6P110A320RS3108Y

EP type number : 0 411 816 729

Governor

Governer design. : RQV250...1100PA589

Governer no. : 9 420 080 288

Cust. part No.

Customer-spec. information

Customer : VOLVO-TRUCK
Motor : THD 100 EC

Power KW : 180.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm: 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.05Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Reak travel in mm: 10.50 Tolerance mm: + 1.50

Filming order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Tolerance : \leftarrow 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 11.15 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 139.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s.

: +- 4.0

Spreed

Tolerance cm3/1000 strokes : 4.0	control lever position degree : - 1
Check tolerance cm3/1000s. : 7.5	Rated speed rpm : 1175
	Rack travel in mm: 16.50 Tolerance mm: + 1.30
Rated speed rpm : 250	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 5.30	+
Tolerance mm : + 0.10	+ Rated speed rpm : 700
Del. quantity cm3/1000 strokes : 32.0	+ Aneroid pressure + hPa : 900
Tolerance	+ Del. quantity
cm3/1000 strokes : + 2.5	+ cm3/1000 strokes : 139.0
Check tolerance	+ Tolerance
cm3/1000s. : +- 5.0 Spreed	+ cm3/1000 strokes : + 1.0 + Check tolerance
Tolerance	+ cm3/1000s. : + 4.0
cm3/1000 strokes : 4.5	Spreed
Check tolerance cm3/1000s. : 7.5	Tolerance
CIID/ 10003. : 7.5	+ cm3/1000 strokes : 4.0 + Check tolerance
	+ cm3/1000s. : 7.5
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	<u> </u>
	CONTROL LEVER
GUIDE SLEEVE TRAVEL	+
Poted aread are a OFO	t control lever
Rated speed rpm : 950 guide sleeve	position degree : 65.0 tolerance degree : +- 4.0
travel mm : 6.50	+
Tolerance mm : + 0.20	+ control lever
Rated speed rpm : 250	<pre>position degree : 119.0 tolerance degree : + 4.0</pre>
guide sleeve	toterance degree : += 4.0
travel mm : 1.20	+ RATED SPEED
Tolerance mm : + 0.10	+ rack travel mm : 10.10
Rated speed rpm : 500	+ Rated speed rpm : 1165 + Tolerance 1/min : + 5
	+
guide sleeve travel mm : 4.50 Tolerance mm : +- 0.40	rack travel mm : 4.00 Rated speed rpm : 1240
Tolerance mm : +- 0.40	+ Rated speed rpm : 1240 + Tolerance 1/min : + 15
Rated speed rpm : 700	+ locerance lymin : + 15
• •	rack travel mm : 0.50
guide sleeve travel mm : 6.50 Tolerance mm : + 0.20	+ Tolerance mm : +- 0.50
Toterance mm : +- U.2U	Rated speed rpm : 1350
Rated speed rpm : 1100	I
guide sleeve	+
travel mm : 7.25	1011 7015
Tolerance mm : +- 0.25	+ LOW IDLE
GUIDE SLEEVE POSITION	control lever
	position degree : 64.0
	+ tolerance degree : +- 4.0

control lever
position degree : 12.0
tolerance degree : + 4.0

Testing:

Rated speed rpm : 250
rack travel mm : 5.30

rack travel mm : 5.30
Tolerance mm : +- 0.10

Rated speed rpm : 100

CRT mm min. : > 6.70

Rated speed rpm : 338

TORQUE CONTROL

Rated speed rpm : 700 rack travel mm : 11.15 Tolerance mm : + 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 900
rack travel mm : 11.15
Tolerance mm : +- 0.05

Pressure hPa : - Rated speed rpm : 500

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 430
rack travel mm : 1.29
Tolerance mm : + 0.10

Pressure hPa : 280 rack travel mm : 0.25 Tolerance mm : + 0.05

Start interlock

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 700 Del. quantity

cm3/1000 strokes : 107.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50

Del. quantity

cm3/1000 strokes : 170.0

Tolerance

cm3/1000 strokes : \leftarrow 10.0

Check tolerance

cm3/1000s. : +- 14.0

LOW IDLE

Rated speed rpm : 250

Del. quantity

cm3/1000 strokes : 32.0

Tolerance

cm3/1000 strokes : +- 2.5

Check tolerance

cm3/1000s. : \leftarrow 5.0

Spreed Tolerance

cm3/1000 strokes : 4.5

Check tolerance

cm3/1000s. : 7.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 26,03,97 : ISO 4113

Combination No. : 9 400 087 438

Injection pump

Pump designation : PE6P110A320RS3108X

EP type number : 0 411 816 730

Governor

Governer design. : RQV250...1100PA589

Governer no. : 9 420 080 288

Cust. part No. :

Customer-spec. information

Customer : VOLVO-TRUCK

Motor

: THD100 ED

Power KW

: 203.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

Tolerance "C

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar

173.5

Tolerance bar

: **←** 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 600 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.C Tolerance bar : +- 1.0

Prestroke mm 3.05 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50

Tolerance mm : + 1.50

Firing order

: 1-5-3-6-2-: 4

Phasing : 0-60-120-180-240

Tolerance : +- 0.50

Check

tolerance *NW : + 0.75

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 12.45 Tolerance mm

: **←** 0.05

Del. quantity

Tolerance

cm3/1000 strokes : +- 1.0

cm3/1000 strokes : 166.0

Check tolerance

cm3/1000s.

: +-4.0

Tolerance cm3/1000 strokes : 4.0	control lever position degree : - 1
Check tolerance cm3/1000s. : 7.5	Rated speed rpm : 1175
	Rack travel in mm : 16.50 Tolerance mm : +- 1.30
Rated speed rpm : 250	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 5.10	}
Tolerance mm : + 0.10	Rated speed rpm : 700
Del. quantity	Aneroid pressure
cm3/1000 strokes : 32.0	hPa : 900
Tolerance - cm3/1000 strokes : + 2.5	Del. quantity cm3/1000 strokes : 166.0
Check tolerance	cm3/1000 strokes : 166.0 Tolerance
cn3/1000s : + 5.0	- cm3/1000 strokes : +- 1.0
Spreed	Check tolerance
Tolerance	cm3/1000s. : +- 4.0
cm3/1000 strokes : 4.5	Spreed
Check tolerance	Tolerance
cm3/1000s. : 7.5	cm3/1000 strokes : 4.0
7	Check tolerance
(D) OFFICE OF THE FOREST PLANT	cm3/1000s. : 7.5
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	
	CONTROL LEVER
GUIDE SLEEVE TRAVEL	CONTINUE EEAEW
	control lever
Rated speed rpm : 950	position degree : 65.0
guide sleeve	tolerance degree : + 4.0
travel mm : 6.50	+
Tolerance min : + 0.20	{- control lever
3.1	position degree : 119.0
Rated speed rpm : 250	tolerance degree : +- 4.0
<pre>guide sleeve travel mm : 1.20</pre>	DATEN COEFN
travel mm : 1.20 - Tolerance mm : +- 0.10 -	RATED SPEED - rack travel mm : 11.10
roterence unii 0.10	Rated speed rpm : 1165
Rated speed rpm : 500	Tolerance 1/min : + 5
guide sleeve	
travel mm : 4.50 -	rack travel mm : 4.00
Tolerance ma : +- 0.40	Rated speed rpm : 1240
	Tolerance 1/min : +- 15
Rated speed rpm : 700	t
guide sleeve	rack travel mm : 0.50
travel mm : 6.50 - Tolerance mm : +- 0.20 -	Tolerance mm : +- 0.50 Rated speed rpm : 1350
Toterance min U.20	Rated speed rpm : 1350
Rated speed rpm : 1100	
guide sleeve	
travel mm : 7.25	
Tolerance mm : + 0.25	LOW IDLE
÷	
	†
GUIDE SLEEVE POSITION	- control lever
1	position degree : 64.0
٦	tolerance degree : +- 4.0

control lever 12.0 position degree : tolerance degree : +- 4.0 Testing: Rated speed rom 250 rack travel mm 5.10 Tolerance mm : +- 0.10 Rated speed rpm 100 : : > 6.70 CRT mm min. Rated speed rpm 338 TORQUE CONTROL 700 Rated speed rpm rack travel mm 12.45 Tolerance mm : + 0.05 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm 500 Pressure hPa 900 rack travel mm 12.15 Tolerance mm : +- 0.05 Pressure hPa Rated speed rpm 500 **MEASUREMENT** Rated speed rpm 500 Pressure hPa 700 : 2.50 rack travel mm : + 0.10 Tolerance mm Pressure hPa 280 0.25 rack travel mm Tolerance mm : +- 0.05 Start interlock FUEL DELIVERY CHARACTERISTICS

Del. quantity cm3/1000 strokes : 113.0 Tolerance cm3/1000 strokes : +-1.0 Check tolerance cm3/1000s. 4.0 STARTING FUEL DELIVERY Rated speed rpm 100 rack travel mm 20.50 Tolerance mm : +- 0.50 Del. quantity cm3/1000 strokes : 170.0 Tolerance cm3/1000 strokes : \leftarrow 10.0 Check tolerance cm3/10003. : + 14.0 LOW IDLE Rated speed rpm 250 Del. quantity cm3/1000 strokes : 32.0 Tolerance cm3/1000 strokes : +-2.5 Check tolerance cm3/1000s. 5.0 Spreed Tolerance cm3/1000 strokes : 4.5 Check tolerance cm3/1000s. 7.5

End of test specification sheet

E01

hPa

Aneroid pressure

Rated speed rpm

700

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 26.03.97 Test oil : ISO 4113

Combination No. : 9 400 087 439

Injection pump

Pump designation : PE6P110A32ORS3108Z

EP type number : 0 411 816 728

Governor

Governer design. : RQV250...11COPA589

Governer no. : 9 420 080 288

Cust. part No. :

Customer-spec. information

Customer : VOLVO-TRUCK
Motor : THD 101 GB

Power KW : 160.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.05 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50
Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Tolerance : \leftarrow 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 10.55

Tolerance nm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 123.0

mb/ rood strokes : 123.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 4.0

Tolerance cm3/1 000 strokes : 4.0	control lever position degree : - 1
Check tolerance cm3/1000s. : 7.5	Rated speed rpm : 1175
	Rack travel in mm : 16.50 Tolerance mm : +- 1.30
Rated speed rpm : 250	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 5.40	F TOLE EOAD DELIVERY AT TOLL EOAD STOP
Tolerance mm : + 0.10	Rated speed rpm : 700
Del. quantity	Aneroid pressure
cm3/1 000 strokes : 32.0 - Tolerance -	hPa : 750
cm3/1000 strokes : +- 2.5	Del. quantity cm3/1000 strokes : 123.0
Check tolerance	Tolerance
cm3/1000s. : +- 5.0	cm3/1000 strokes : +- 1.0
Spreed -	Check tolerance
Tolerance - cm3/1000 strokes : 4.5 -	- cm3/1000s. : +- 4.0 - Spreed
Check tolerance	Tolerance
cm3/1000s. : 7.5	cm3/1000 strokes : 4.0
-	Check tolerance
(B) SETTING OF INJECTION PUMP	- cm3/1900s. : 7.5
WITH GOVERNOR -	
	CONTROL LEVER
GUIDE SLEEVE TRAVEL	- CONTROL CEVER
	control lever
Rated speed rpm : 950	position degree : 65.0
guide sleeve - travel mm : 6.50 -	tolerance degree : +- 4.0
Tolerance mm : +- 0.20	control lever
-	position degree : 119.0
Rated speed rpm : 250	tolerance degree : + 4.0
guide sleeve - travel mm : 1.20 -	T RATED SPEED
Tolerance mm : + 0.10	rack travel mm : 9.50
	Rated speed rpm : 1165
Rated speed rpm : 500	\
	Tolerance 1/min: +- 5
guide sleeve	}-
travel mm : 4.50	rack travel mm : 4.00
guide sleeve - travel mm : 4.50 - Tolerance mm : + 0.40 -	rack travel mm : 4.00 Rated speed rpm : 1240
travel mm : 4.50 - Tolerance mm : + 0.40 - Rated speed rpm : 700 -	rack travel mm : 4.00 Rated speed rpm : 1240 Tolerance 1/min : +- 15
travel mm : 4.50 Tolerance mm : + 0.40 Rated speed rpm : 700 guide sleeve	rack travel mm : 4.00 Rated speed rpm : 1240 Tolerance 1/min : + 15 rack travel mm : 0.50
travel mm : 4.50 Tolerance mm : + 0.40 Rated speed rpm : 700 guide sleeve travel mm : 6.50	rack travel mm : 4.00 Rated speed rpm : 1240 Tolerance 1/min : + 15 rack travel mm : 0.50
travel mm : 4.50 Tolerance mm : + 0.40 Rated speed rpm : 700 guide sleeve	rack travel mm : 4.00 Rated speed rpm : 1240 Tolerance 1/min : +- 15
travel mm : 4.50 Tolerance mm : + 0.40 Rated speed rpm : 700 guide sleeve travel mm : 6.50	rack travel mm : 4.00 Rated speed rpm : 1240 Tolerance 1/min : + 15 rack travel mm : 0.50
travel mm : 4.50 Tolerance mm : + 0.40 Rated speed rpm : 700 guide sleeve travel mm : 6.50 Tolerance mm : + 0.20 Rated speed rpm : 1100	rack travel mm : 4.00 Rated speed rpm : 1240 Tolerance 1/min : + 15 rack travel mm : 0.50
travel mm : 4.50 Tolerance mm : + 0.40 Rated speed rpm : 700 guide sleeve travel mm : 6.50 Tolerance mm : + 0.20 Rated speed rpm : 1100	rack travel mm : 4.00 Rated speed rpm : 1240 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1350
travel mm : 4.50 Tolerance mm : + 0.40 Rated speed rpm : 700 guide sleeve travel mm : 6.50 Tolerance mm : + 0.20 Rated speed rpm : 1100 guide sleeve	rack travel mm : 4.00 Rated speed rpm : 1240 Tolerance 1/min : + 15 rack travel mm : 0.50
travel mm : 4.50 Tolerance mm : + 0.40 Rated speed rpm : 700 guide sleeve travel mm : 6.50 Tolerance mm : + 0.20 Rated speed rpm : 1100 guide sleeve travel mm : 7.25 Tolerance mm : + 0.25	rack travel mm : 4.00 Rated speed rpm : 1240 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1350 LOW IDLE
travel mm : 4.50 Tolerance mm : + 0.40 Rated speed rpm : 700 guide sleeve travel mm : 6.50 Tolerance mm : + 0.20 Rated speed rpm : 1100	rack travel mm : 4.00 Rated speed rpm : 1240 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1350 LOW IDLE control lever
travel mm : 4.50 Tolerance mm : + 0.40 Rated speed rpm : 700 guide sleeve travel mm : 6.50 Tolerance mm : + 0.20 Rated speed rpm : 1100 guide sleeve travel mm : 7.25 Tolerance mm : + 0.25	rack travel mm : 4.00 Rated speed rpm : 1240 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1350 LOW IDLE

Check control lever speed 1/min :> 80 position degree : 11.0 tolerance degree : +- 4.0 FUEL DELIVERY CHARACTERISTICS Testing: Aneroid pressure 250 Rated speed rpm rack travel mm 5.40 Rated speed rpm : 700 Tolerance mm : + - 0.10Del. quantity cm3/1000 strokes : 107.0 2.00 rack travel mm Tolerance : 380 Rated speed rpm cm3/1000 strokes : +-1.0 Tolerance 1/min 30 : +-Check tolerance cm3/1000s. : +-4.0 Rated speed rpm 100 CRT mm min. : > 6.80 STARTING FUEL DELIVERY TORQUE CONTROL Rated speed rpm 100 rack travel mm : 20.50 700 Rated speed rpm : Tolerance mm : **←** 0.50 rack travel mm 10.55 Del. quantity Tolerance mm : + 0.05cm3/1000 strokes: 175.0 Tolerance cm3/1000 strokes : +- 10.0 ANEROID/ALTITUDE Check tolerance COMPENSATOR TEST cm3/1000s. : +- 14.0 SETTING Rated speed rpm 500 LOW IDLE Pressure hPa 750 rack travel mm 10.55 Rated speed rpm : 250 Tolerance mm : +- 0.05 Del. quantity cm3/1000 strokes : 32.0 Pressure hPa Tolerance 500 cm3/1000 strokes : +-Rated speed rpm 2.5 rack travel mm 9.70 Check tolerance cm3/1000s.: +-5.0 Tolerance mm : + 0.10Spreed **MEASUREMENT** Tolerance cm3/1000 strokes : 4.5 Rated speed rpm 500 Check tolerance cm3/1000s.7.5 Pressure hPa 310 rack travel mm 10.30 Tolerance mm : + 0.10Pressure hPa 265 9.95 rack travel mm End of test specification sheet : + 0.05 Tolerance mm Start interlock

100

: >

Rated speed rpm

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 13.03.97

Test oil

Combination No. : 9 400 030 669FS

Injection pump

Pump designation : PES6A100D320/3RS3503

EP type number : 9 410 037 213

Governor

Governer design. :

Governer no. :

Cust. part No. : TATA-CUMMINS

Customer-spec. information

Customer : CUMMINS

: 6BTAA-160

Motor

Power KW

: 118.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2;

Test oil inlet

temp. °C

Tolerance °C

: + 2.0

Overflow valve : 9 451 037 430

Inlet press. bar :

2.0

Tolerance bar : + 0.1

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar

: 173.5

Tolerance bar $: \leftarrow 1.5$

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0

x length mm :

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm

3.10

Toterance mm

: +- C.05

Check

: + 0.10

tolerance mm

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order

: 1-5-3-6-2-

Phasing

: 0-60-120-180-240

Start of delivery blocking

*NW after s.o.d. : 7.00

Tolerance

: +- 0.10

Check

tolerance °NW : + 0.29

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm: 11.75

Tolerance mm : + 0.05

Del. quantity

97.7

cm3/1000 strokes :

Tolerance -	🕂 guide sleeve
cm3/1000 strokes : +- 1.0	travel mm : 3.30
	Tolerance mm : +- 0.25
Check tolerance	
cm3/1000s. : +- 3.0	Rated speed rpm : 560
CM3/10005,	
0	guide sleeve
Spreed	travel mm : 3.37
•	Tolerance mm : +- 0.25
Tolerance -	+
cm3/1000 strokes : 3.5	Rated speed rpm : 1620
	guide sleeve
Check tolerance -	travel mm : 11.50
cm3/1000s. : 6.0	
CMD/10005. , 0.0	Tolerance mm : +- 0.50
	†
•	
•	GUIDE SLEEVE POSITION
Rated speed rpm : 400 -	}
	Rated speed rpm : 1250
Rack travel in mm: 6.00	1.200
Tolerance mn : + 0.10	Rack travel in mm : 16.00
Del. quantity	Tolerance mm : +- 1.30
cm3/1000 strokes : 10.0	†
Tolerance -	
cm3/1000 strokes : $+$ 3.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance -	
cm3/1000s. : + 4.5	Rated speed rpm : 1000
Spreed	Aneroid pressure
Tolerance -	
	hPa : 600
cm3/1000 strokes : 4.5	Del. quantity
Check tolerance -	 cm3/1000 strokes : 97.7
cm3/1000s. : 5.5	+ Tolerance
-	cm3/1000 strokes : +- 1.0
•	Check tolerance
(B) SETTING OF INJECTION PUMP	cm3/1000s. : +- 3.0
WITH GOVERNOR	1
WITH GOVERNOR	Spreed
•	Tolerence
	cm3/1000 strokes : 3.5
GUIDE SLEEVE TRAVEL -	- Check tolerance
•	- cm3/1000s. : 6.0
Rated speed rpm : 1347 -	
guida slaeve	
travel mm : 8.48 -	
	CONTROL LEVER
Tolerance mm : + 0.15	CONTROL LEVER
Tolerance mm : + 0.15	}
Tolerance mm : + 0.15 - Rated speed rpm : 400 -	control lever
Tolerance mm : + 0.15 - Rated speed rpm : 400 - guide sleeve -	control lever position degree : 61.0
Tolerance mm : + 0.15 - Rated speed rpm : 400 -	control lever
Tolerance mm : + 0.15 Rated speed rpm : 400 - guide sleeve travel mm : 1.71	control lever position degree : 61.0
Tolerance mm : + 0.15 Rated speed rpm : 400 - guide sleeve travel mm : 1.71	control lever position degree : 61.0 tolerance degree : + 4.0
Tolerance mm : + 0.15 Rated speed rpm : 400 guide sleeve travel mm : 1.71 Tolerance mm : + 0.20	control lever position degree : 61.0 tolerance degree : + 4.0 RATED SPEED
Tolerance mm : + 0.15 Rated speed rpm : 400 guide sleeve travel mm : 1.71 Tolerance mm : + 0.20 Rated speed rpm : 880	control lever position degree : 61.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.75
Tolerance mm : + 0.15 Rated speed rpm : 400 guide sleeve travel mm : 1.71 Tolerance mm : + 0.20 Rated speed rpm : 880 guide sleeve	control lever position degree : 61.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.75 Rated speed rpm : 1300
Tolerance mm : + 0.15 Rated speed rpm : 400 guide sleeve travel mm : 1.71 Tolerance mm : + 0.20 Rated speed rpm : 880 guide sleeve travel mm : 4.97	control lever position degree : 61.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.75
Tolerance mm : + 0.15 Rated speed rpm : 400 guide sleeve travel mm : 1.71 Tolerance mm : + 0.20 Rated speed rpm : 880 guide sleeve	control lever position degree : 61.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.75 Rated speed rpm : 1300 Tolerance 1/min : + 5
Tolerance mm : + 0.15 Rated speed rpm : 400 guide sleeve travel mm : 1.71 Tolerance mm : + 0.20 Rated speed rpm : 880 guide sleeve travel mm : 4.97 Tolerance mm : + 0.25	control lever position degree : 61.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.75 Rated speed rpm : 1300 Tolerance 1/min : + 5 rack travel mm : 4.00
Tolerance mm : + 0.15 Rated speed rpm : 400 guide sleeve travel mm : 1.71 Tolerance mm : + 0.20 Rated speed rpm : 880 guide sleeve travel mm : 4.97	control lever position degree : 61.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.75 Rated speed rpm : 1300 Tolerance 1/min : + 5
Tolerance mm : + 0.15 Rated speed rpm : 400 guide sleeve travel mm : 1.71 Tolerance mm : + 0.20 Rated speed rpm : 880 guide sleeve travel mm : 4.97 Tolerance mm : + 0.25 Rated speed rpm : 499	control lever position degree : 61.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.75 Rated speed rpm : 1300 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1425
Tolerance mm : + 0.15 Rated speed rpm : 400 guide sleeve travel mm : 1.71 Tolerance mm : + 0.20 Rated speed rpm : 880 guide sleeve travel mm : 4.97 Tolerance mm : + 0.25 Rated speed rpm : 499 guide sleeve	control lever position degree : 61.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.75 Rated speed rpm : 1300 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1425
Tolerance mm : + 0.15 Rated speed rpm : 400 guide sleeve travel mm : 1.71 Tolerance mm : + 0.20 Rated speed rpm : 880 guide sleeve travel mm : 4.97 Tolerance mm : + 0.25 Rated speed rpm : 499 guide sleeve travel mm : 2.75	control lever position degree : 61.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.75 Rated speed rpm : 1300 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1425 Tolerance 1/min : + 15
Tolerance mm : + 0.15 Rated speed rpm : 400 guide sleeve travel mm : 1.71 Tolerance mm : + 0.20 Rated speed rpm : 880 guide sleeve travel mm : 4.97 Tolerance mm : + 0.25 Rated speed rpm : 499 guide sleeve	control lever position degree : 61.0 tolerance degree : 4.0 RATED SPEED rack travel mm : 10.75 Rated speed rpm : 1300 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1425 Tolerance 1/min : + 15 rack travel mm : 0.50
Tolerance mm : + 0.15 Rated speed rpm : 400 guide sleeve travel mm : 1.71 Tolerance mm : + 0.20 Rated speed rpm : 880 guide sleeve travel mm : 4.97 Tolerance mm : + 0.25 Rated speed rpm : 499 guide sleeve travel mm : 2.75 Tolerance mm : + 0.25	control lever position degree : 61.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.75 Rated speed rpm : 1300 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1425 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50
Tolerance mm : + 0.15 Rated speed rpm : 400 guide sleeve travel mm : 1.71 Tolerance mm : + 0.20 Rated speed rpm : 880 guide sleeve travel mm : 4.97 Tolerance mm : + 0.25 Rated speed rpm : 499 guide sleeve travel mm : 2.75	control lever position degree : 61.0 tolerance degree : 4.0 RATED SPEED rack travel mm : 10.75 Rated speed rpm : 1300 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1425 Tolerance 1/min : + 15 rack travel mm : 0.50

		+		
		+	Pressure hPa	: 400
		+	rack travel mm	: 11.20
		 †	Tolerance mm	: ← 0.20
FOM IDTE		t		
		†	Pressure hPa	: 340
		+	rack travel mm	
control lever		· +	Tolerance mm	: 0.20
position degree	: 15.0	+		
tolerance degree	: +- 4.0	+	Start interlock	
_ •		†		
Testing:		†	Rated speed rpm	
	400	†	Rated speed rpm	: < 300
Rated speed rpm	: 400	†		
rack travel mm	: 6.00	+	Check	
Tolerance mm	: ← 0.10	. 🕇	speed 1/min	: > 100
		t	Check	
rack travel mm		†	speed 1/min	: < 340
Rated speed rpm		†		
Tolerance 1/min	: ← 30	†		
	400	†	FUEL DÉLIVERY CHA	RACTERISTICS
Rated speed rpm	: 100	†		
		†	Aneroid pressure	400
CRT mm min.	: > 9.00	†	hPa	: 600
		†	Rated speed rpm	: 750
			Del. quantity	
TORQUE CONTROL		t	cm3/1000 strokes	: 96.2
		+	Tolerance	
Rated speed rpm	: 1000	†	cm3/1000 strokes	: ← 2.0
rack travel mm		+	Check tolerance	
Tolerance mm	: +- 0.05	†	cm3/1000s.	: +- 3.5
		+	Spreed	
Rated speed rpm	: 750	+	Tolerance	
rack travel mm	: 11.75	+	cm3/1000 strokes	: 8.0
Tolerance mm	: +- 0.10	+	Check tolerance	
		+	cm3/1000s.	: 10.0
Rated speed rpm	: 1250	+		
rack travel mm	: 11.75	+	Aneroid pressure	
Tolerance mm	: ← 0.10	+	hPa	: 600
		+	Rated speed rpm	: 1250
			Del. quantity	
ANEROID/ALTITUDE		+	cm3/1000 strokes	: 99.4
COMPENSATOR TEST		+	Tolerance	
		+	cm3/1000 strokes	: ← 2.0
		+	Check tolerance	
SETTING		+	cm3/1000s.	: ← 3.5
		+	Spreed	
Rated speed rpm	: 550	+	Tolerance	
Pressure hPa	: 600	+	cm3/1000 strokes	: 8.0
rack travel mm	: 11.75	+	Check tolerance	
Tolerance mm		+	cm3/1000s.	: 10.0
		+		
Pressure hPa	: -	+	Aneroid pressure	
Rated speed rpm	: 550	+	hPa	: -
rack travel mm	: 10.50	+	Rated speed rpm	: 550
Rated speed rpm rack travel mm Tolerance mm	: ← 0.10	+	Del. quantity	=
		+	cm3/1000 strokes	: 64.3
MEASUREMENT		+	Tolerance	
		+	cm3/1000 strokes	: ← 2.0
Rated speed rpm	: 550	+		

E07

Check tolerance cm3/1000S. : +- 3.0 Spreed Tolerance

cm3/1000 strokes : 8.0

Check tolerance cm3/1000s. : 10.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 12.00 Tolerance mm : + 0.75 Del. quantity

cm3/1000 strokes : 109.0

Tolerance cm3/1000 stroke

cm3/1000 strokes : +- 8.0

Check tolerance

cm3/1000s. : \leftarrow 10.0

LOW IDLE

Rated speed rpm : 400

Del. quantity

cm3/1000 strokes : 10.0

Tolerance

cm3/1000 strokes : \leftarrow 3.0

Check tolerance

cm3/1000s. : +- 4.5

Spreed

Tolerance

cm3/1000 strokes : 4.5

Check tolerance

cm3/1000s. : 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 26.03.97 Test oil : ISO 4113

Combination No. : 0 400 846 493

Injection pump

Pump designation : PES6A90D410RS2596 EP type number : 0 410 896 073

Governor

Governer design. : RQV300...1400AB1120

: 1L

Governer no. : 0 420 212 157

Cust. part No. :

Customer-spec. information
Customer : MB-NFZ
Motor : 0M352A
Power KW : 124.0

TEST BENCH REQUIREMENTS

Inlet line : 1.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Tolerance : + 0.50

Check

tolerance $^{\circ}NW$: + 0.75

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm : 11.95

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 73.5

Tolerance

cm3/1000 strokes : + 0.5

Check tolerance

cm3/1000s. : +- 2.5

Spreed

Tolerance

cm3/1000 strokes : 3.0

Check tolerance

cm3/1000s : 4.5

Rated speed rpm : 300

	+
Rack travel in mm : 8.60	∔ control lever
Tolerance mm : + 0.10	position degree : - 1
Del. quantity	+ Rated speed rpm : 1500
cm3/1000 strokes : 12.0	Adted speed (piii . 1900
Tolerance	Rack travel in mm: 16.50
cm3/1000 strokes : +- 3.0	
Check tolerance	† Tolerance mm : + 1.30
	Ť
	FINAL LOAD DELTIFON AT FINAL LOAD COMP
Spreed	+ FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance	†
cm3/1000 strokes : 2.0	+ Rated speed rpm : 1400
Check tolerance	+ Aneroid pressure
cm3/1 000 S. : 4.0	+ hPa : 700
	† Del. quantity
	+ cm3/1000 strokes : 73.5
(B) SETTING OF INJECTION PUMP	† Tolerance
WITH GOVERNOR	+ cm3/1000 strokes : +- 0.5
	+ Check tolerance
	- + cm3/1000s. : +- 2.5
GUIDE SLEEVE TRAVEL	+ Spreed
- · - · · · · · · · · · · · · · · · · ·	+ Tolerance
Rated speed rpm : 1453	+ cm3/1000 strokes : 3.0
guide sleeve	- Check tolerance
travel mm : 8.06	+ cm3/1000s. : 4.5
Tolerance mm : + 0.25	1
TO CET AT ICE THAIR	I
Rated speed rpm : 300	T
guide sleeve	CONTROL LEVED
	+ CONTROL LEVER
travel mm : 1.06	T
Tolerance mm : + 0.25	+ control lever
D	+ position degree : 115.0
Rated speed rpm : 923	tolerance degree : +- 4.0
guide sleeve	†
travel mm : 4.87	+ RATED SPEED
Tolerance mm : + 0.25	rack travel mm : 10.90
	+ Rated speed rpm : 1445
Rated speed rpm : 593	<pre>+ Tolerance 1/min : +- 5</pre>
guide sleeve	+
travel mm : 3.46	† rack travel mm : 4.00
Tolerance mm : + 0.25	+ Rated speed rpm : 1585
	+ Tolerance 1/min : +- 15
Rated speed rpm : 643	+
guide sleeve	∔ rack travel mm : 0.50
travel mm : 3.86	+ Tolerance mm : +- 0.50
Tolerance mm : + 0.25	Rated speed rpm : 1750
	1
Rated speed rpm : 610	1
guide steeve	1
travel mm : 3.76	
Tolerance mm : + 0.25	LOW IDLE
1000 GI 100 HAN	T
Rated speed rpm : 1810	I
guide steeve	T control lever
Tolerance mm : + 0.50	tolerance degree : +- 4.0
	Tanking
CHINE OF FEME DOCTION	- † Testing:
GUIDE SLEEVE POSITION	T 200

Rated speed rpm :

300

rack travel mm Tolerance mm	: 8.60 : +- 0.10	Rated speed rpm : < 220
	400	+ Check
Rated speed rpm	: 100	+ speed 1/min : > 80
CRT mm min.	: > 10.10	+ Check + speed 1/min : < 240
Rated speed rpm	: 625	I
	. 025	FUEL DELIVERY CHARACTERISTICS
TORQUE CONTROL		Aneroid pressure
		Aneroid pressure hPa : 700 Rated speed rpm : 500 Del. quantity
Rated speed rpm	: 1400	+ Rated speed rpm : 500
rack travel mm Tolerance mm	: 11.95	+ Del. quantity
Tolerance mm	: +- 0.05	+ cm3/1000 strokes : 68.5
		+ Tolerance
Rated speed rpm	: 5 00	+ cm3/1000 strokes : +- 1.0
rack travel mm		+ Check tolerance
Tolerance mm		+ cm3/1000s. : + 3.0
roter arree man		1
Rated speed rpm	: 1000	Aneroid pressure
rack travel mm		hPa : -
Tolerance mm	: + 0.10	•
local actica limit	. +- 0.10	
Rated speed rpm	1200	+ Del. quantity + cm3/1000 strokes : 57.0
rack travel mm	. 1200	
Talanana an	: + 0.15	Tolerance
Tolerance mm	: +- 0.15	+ cm3/1000 strokes : +- 1.0
		+ Check tolerance
ANEDOTO /AL TITUDE		+ cm3/1000s. : + 3.0
ANEROID/ALTITUDE		†
COMPENSATOR TEST		†
		† STARTING FUEL DELIVERY
APPTALIA		
SETTING		100
	500	Rated speed rpm : 100
Rated speed rpm		rack travel mm : 15.10
Rated speed rpm Pressure hPa	: 700	rack travel mm : 15.10 Tolerance mm : + 0.20
Rated speed rpm Pressure hPa rack travel mm	: 700 : 13.05	rack travel mm : 15.10 Tolerance mm : + 0.20 Del. quantity
Rated speed rpm Pressure hPa	: 700	rack travel mm : 15.10 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 77.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 700 : 13.05	rack travel mm : 15.10 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 77.0 Tolerance
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa	: 700 : 13.05 : +- 0.05	rack travel mm : 15.10 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 5.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm	: 700 : 13.05 : +- 0.05 : - : 500	rack travel mm : 15.10 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm	: 700 : 13.05 : +- 0.05 : - : 500 : 11.95	rack travel mm : 15.10 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 5.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm	: 700 : 13.05 : +- 0.05 : - : 500 : 11.95	rack travel mm : 15.10 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 700 : 13.05 : +- 0.05 : - : 500 : 11.95	rack travel mm : 15.10 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm	: 700 : 13.05 : +- 0.05 : - : 500 : 11.95	rack travel mm : 15.10 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 700 : 13.05 : + 0.05 : - : 500 : 11.95 : + 0.05	rack travel mm : 15.10 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 700 : 13.05 : + 0.05 : - : 500 : 11.95 : + 0.05	rack travel mm : 15.10 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm	: 700 : 13.05 : ← 0.05 : ← 500 : 11.95 : ← 0.05	rack travel mm : 15.10 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa	: 700 : 13.05 : ← 0.05 : ← 500 : 11.95 : ← 0.05 : 500 : 220	rack travel mm : 15.10 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm	: 700 : 13.05 : ← 0.05 : ← 0.05 : 500 : 11.95 : ← 0.05 : 500 : 220 : 12.30	rack travel mm : 15.10 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300 Del. quantity
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa	: 700 : 13.05 : ← 0.05 : ← 0.05 : 500 : 11.95 : ← 0.05 : 500 : 220 : 12.30	rack travel mm : 15.10 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300 Del. quantity cm3/1000 strokes : 12.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 700 : 13.05 : + 0.05 : : 500 : 11.95 : + 0.05 : 500 : 220 : 12.30 : + 0.10	rack travel mm : 15.10 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300 Del. quantity cm3/1000 strokes : 12.0 Tolerance
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 700 : 13.05 : + 0.05 : : 500 : 11.95 : + 0.05 : 500 : 220 : 12.30 : + 0.10 : 320	rack travel mm : 15.10 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300 Del. quantity cm3/1000 strokes : 12.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 700 : 13.05 : + 0.05 : : 500 : 11.95 : + 0.05 : 500 : 220 : 12.30 : + 0.10	rack travel mm : 15.10 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300 Del. quantity cm3/1000 strokes : 12.0 Tolerance
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 700 : 13.05 : + 0.05 : : 500 : 11.95 : + 0.05 : 500 : 220 : 12.30 : + 0.10 : 320	rack travel mm : 15.10 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : + 3.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm	: 700 : 13.05 : + 0.05 : : 500 : 11.95 : + 0.05 : 500 : 220 : 12.30 : + 0.10 : 320 : 12.75	rack travel mm : 15.10 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm	: 700 : 13.05 : + 0.05 : : 500 : 11.95 : + 0.05 : 500 : 220 : 12.30 : + 0.10 : 320 : 12.75	rack travel mm : 15.10 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 5.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: 700 : 13.05 : + 0.05 : : 500 : 11.95 : + 0.05 : 500 : 220 : 12.30 : + 0.10 : 320 : 12.75	rack travel mm : 15.10 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: 700 : 13.05 : + 0.05 : - 500 : 11.95 : + 0.05 : 500 : 220 : 12.30 : + 0.10 : 320 : 12.75 : + 0.05	rack travel mm : 15.10 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 77.0 Tolerance cm3/1000 strokes : + 5.0 Check tolerance cm3/1000s. : + 8.0 LOW IDLE Rated speed rpm : 300 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance

Check tolerance cm3/1000s.	:	4.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 25.03.97

Test oil : ISO 4113

Combination No. : 0 400 866 235

Injection pump

Pump designation : PES6A95D410/3RS2907

EP type number : 0 410 896 884

Governor

Governer design. : RSV325...1250A5c917L

Governer no.

: 0 420 232 639

Cust. part No. : 0423 2334 KY

Customer-spec. information Customer : KHD-DMI Motor

: F6L913

Power KW

: 89.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

40

Tolerance °C

2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

173.5

Tolerance bar

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : +- 1.0

Prestroke mm Tolerance mm

3.00 : +- 0.05

Check

: +- 0.10 tolerance mm

Rack travel in mm : 10.50

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

Tolerance : +- 0.50

Cneck

tolerance *NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 11.35

Tolerance mm : \div 0.05

Del. quantity

cm3/1000 strokes : 76.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s.

: +- 3.0

Tolerance cm3/1000 strokes : 3.5 Check tolerance	Check tolerance cm3/1000s. : 8.0
cm3/1000s. : 8.0	- CONTROL LEVER
Rated speed rpm : 325	- control lever - position degree : 102.0 - tolerance degree : +- 4.0
Rack travel in mm: 8.50 Tolerance mm: +- 0.10 Del. quantity cm3/1000 strokes: 11.5 Tolerance cm3/1000 strokes: +- 2.0	RATED SPEED rack travel mm : 10.35 Rated speed rpm : 1295 Tolerance 1/min : + 5
Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance	rack travel mm : 4.00 Rated speed rpm : 1340 Tolerance 1/min : + 15
cm3/1000 strokes : 5.5 Check tolerance cm3/1000s. : 9.0	rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1510
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 4.00 Rated speed rpm : 1360
ę .	
GUIDE SLEEVE POSITION	LOW IDLE
GUIDE SLEEVE POSITION control lever position degree : FREE Rated speed rpm : 800	LOW IDLE control lever position degree : 69.0 tolerance degree : 4.0
control lever position degree : FREE	control lever position degree : 69.0 tolerance degree : +- 4.0 Setting point w/out bumper spring
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50	control lever position degree : 69.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel nm : 8.00 Tolerance mm : + 0.10
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	control lever position degree : 69.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel num : 3.00 Tolerance num : + 0.10 Testing: Rated speed rpm : 325
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250	control lever position degree : 69.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel num : 3.00 Tolerance num : + 0.10 Testing:
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity	control lever position degree : 69.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : + 0.10 Testing: Rated speed rpm : 325 rack travel mm : 8.50 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 485
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 76.0 Tolerance cm3/1000 strokes : + 1.0	control lever position degree : 69.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : + 0.10 Testing: Rated speed rpm : 325 rack travel mm : 8.50 Tolerance mm : + 0.10 rack travel mm : 2.00
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 76.0 Tolerance	control lever position degree : 69.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 3.00 Tolerance mm : + 0.10 Testing: Rated speed rpm : 325 rack travel mm : 8.50 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 485 Tolerance 1/min : + 30

Rated speed rpm 1250 11.35 rack travel mm Tolerance mm +- 0.05

Rated speed rpm 750 rack travel mm 11.80 Tolerance mm : +- 0.10

Start interlock

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 750 Rated speed rpm

Del. quantity

cm3/1000 strokes : 70.0

Tolerance

cm3/1000 strokes : +-2.0

Check tolerance

cm3/1000s. 4.5

STARTING FUEL DELIVERY

100 Rated speed rpm rack travel mm 17.00 Tolerance mm : +- 0.75

Del. quantity

cm3/1000 strokes : 90.0

Tolerance

7.5 cm3/1000 strokes

Check tolerance

cm3/1000s. : + 10.0

LOW IDLE

325 Rated speed rpm

Del. quantity

cm3/1000 strokes : 11.5

Tolerance

cm3/1000 strokes 2.0

Check tolerance

cm3/1000s.4.5

Spreed

Tolerance

cm3/1000 strokes 5.5

Check tolerance

cm3/1000s.9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 21.03.97

Test oil

: ISO 4113

Combination No. : 0 400 874 257

Injection pump

Pump designation : PES4A95D32ORS2807

EP type number

: 0 410 894 994

Governor

Governer design. : RSV375...1125A2C898R

Governer no.

: 0 420 233 351

Cust. part No. : 8367 54718

Customer-spec. information

Customer

: SISU

Motor

: 420 DS

Power Kil

: 75.0

TEST BENCH REQUIREMENTS

Inlet line

: 2.3

Test oil inlet

temp. °C

Tolerance *C

2.0

Overflow valve

: 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

173.5

Tolerance bar

: +- 1.5

Test lines

: 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0

x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : ← 1.0

Firing order : 1-2-4-3

Phasing

: 0-90-180-270

Beginning of delivery differende

and maximum rack

travel

9.00

Tolerance mm Difference * CS :

: -- 0.50 5.00

BASIC SETTING

Rated speed rpm : 1125

Rack travel in mm: 11.25

Tolerance mm

: → 0.05

Del. quantity

cm3/1000 strokes :

87.5

Tolerance

cm3/1000 strokes : +-

1.0

Check tolerance

cm3/1000s.

: +-3.0

Spreed

Tolerance

cm3/1000 strokes :

3.5

Check tolerance

cm3/1000s.

8.0

	•
	+ rack travel mm : 10.20
Rated speed rpm : 375	+ Rated speed rpm : 1170
	† Tolerance 1/min : +- 5
Rack travel in mm: 5.60	†
Tolerance mm : +- 0.10	+ rack travel mm : 4.00
Del. quantity	+ Rated speed rpm : 1250
cm3/1000 strokes : 21.0	+ Tolerance 1/min : +- 15
Tolerance	+
cm3/1000 strokes : +- 2.0	+ rack travel mm : 0.85
Check toleranc≥	† Tolerance mm : +- 0.55
cm3/1000s. : +- 4.5	+ Rated speed rpm : 1410
Spreed	+
Tolerance	f rack travel mm : 4.00
cm3/1000 strokes : 5.5	+ Rated speed rpm : 1260
Check tolerance	+
cm3/1000s. : 9.0	+
	†
	+
(B) SETTING OF INJECTION PUMP	+ LOW IDLE
WITH GOVERNOR	+
	+
	+ control lever
	+ position degree : 75.0
GUIDE SLEEVE POSITION	tolerance degree : + 4.0
	+
	+ Setting point w/out bumper spring
control lever	+
position degree : - 3	+ Rated speed rpm : 375
Rated speed rpm : 800	+ rack travel mm : 5.10
	+ Tolerance mm : + 0.10
Rack travel in mm : 0.50	+
Tolerance mm : + 0.20	+ Testing:
	· ·
	+
	+ Rated speed rpm : 375
FULL LOAD DELIVERY AT FULL LOAD STOP	+ Rated speed rpm : 375 + rack travel mm : 5.60
FULL LOAD DELIVERY AT FULL LOAD STOP	
	+ rack travel mm : 5.60
	+ rack travel mm : 5.60
Rated speed rpm : 1125	rack travel mm : 5.60 Tolerance mm : + 0.10 rack travel mm : 2.00
Rated speed rpm : 1125 Aneroid pressure hPa : -	rack travel mm : 5.60 Tolerance mm : + 0.10
Rated speed rpm : 1125 Aneroid pressure	rack travel mm : 5.60 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 495
Rated speed rpm : 1125 Aneroid pressure hPa : - Del. quantity	rack travel mm : 5.60 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 495 Tolerance 1/min : + 30
Rated speed rpm : 1125 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 87.5	rack travel mm : 5.60 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 495 Tolerance 1/min : + 30
Rated speed rpm : 1125 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 87.5 Tolerance	rack travel mm : 5.60 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 495 Tolerance 1/min : + 30
Rated speed rpm : 1125 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 87.5 Tolerance cm3/1000 strokes : +- 1.0	rack travel mm : 5.60 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 495 Tolerance 1/min : + 30 Rated speed rpm : 100
Rated speed rpm : 1125 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 87.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0	rack travel mm : 5.60 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 495 Tolerance 1/min : + 30 Rated speed rpm : 100
Rated speed rpm : 1125 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 87.5 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance	rack travel mm : 5.60 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 495 Tolerance 1/min : + 30 Rated speed rpm : 100
Rated speed rpm : 1125 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 87.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance	rack travel mm : 5.60 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 495 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.50
Rated speed rpm : 1125 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 87.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance	rack travel mm : 5.60 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 495 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.50 TORQUE CONTROL Rated speed rpm : 1125
Rated speed rpm : 1125 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 87.5 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.0 Spreed Tolerance cm3/1000 strokes : 3.5	rack travel mm : 5.60 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 495 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.50
Rated speed rpm : 1125 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 87.5 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance	rack travel mm : 5.60 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 495 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.50 TORQUE CONTROL Rated speed rpm : 1125
Rated speed rpm : 1125 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 87.5 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance	rack travel mm : 5.60 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 495 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.50 TORQUE CONTROL Rated speed rpm : 1125 rack travel mm : 11.25
Rated speed rpm : 1125 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 87.5 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance	rack travel mm : 5.60 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 495 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.50 TORQUE CONTROL Rated speed rpm : 1125 rack travel mm : 11.25
Rated speed rpm : 1125 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 87.5 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance	rack travel mm : 5.60 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 495 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.50 TORQUE CONTROL Rated speed rpm : 1125 rack travel mm : 11.25 Tolerance mm : + 0.05
Rated speed rpm : 1125 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 87.5 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 8.0	rack travel mm : 5.60 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 495 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.50 TORQUE CONTROL Rated speed rpm : 1125 rack travel mm : 11.25 Tolerance mm : + 0.05 Rated speed rpm : 500
Rated speed rpm : 1125 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 87.5 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000 strokes : 3.5	rack travel mm : 5.60 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 495 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.50 TORQUE CONTROL Rated speed rpm : 11.25 rack travel mm : 11.25 Tolerance mm : + 0.05 Rated speed rpm : 500 rack travel mm : 11.60 Tolerance mm : + 0.05
Rated speed rpm : 1125 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 87.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 8.0	rack travel mm : 5.60 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 495 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.50 TORQUE CONTROL Rated speed rpm : 11.25 rack travel mm : 11.25 Tolerance mm : + 0.05 Rated speed rpm : 500 rack travel mm : 11.60 Tolerance mm : + 0.05
Rated speed rpm : 1125 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 87.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 8.0 CONTROL LEVER control lever position degree : 101.0	rack travel mm : 5.60 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 495 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.50 TORQUE CONTROL Rated speed rpm : 11.25 rack travel mm : 11.25 Tolerance mm : + 0.05 Rated speed rpm : 500 rack travel mm : 11.60 Tolerance mm : + 0.05 Rated speed rpm : 750
Rated speed rpm : 1125 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 87.5 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 8.0 CONTROL LEVER control lever position degree : 101.0	rack travel mm : 5.60 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 495 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.50 TORQUE CONTROL Rated speed rpm : 11.25 rack travel mm : 11.25 Tolerance mm : + 0.05 Rated speed rpm : 500 rack travel mm : 11.60 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 750 rack travel mm : 11.55
Rated speed rpm : 1125 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 87.5 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 8.0 CONTROL LEVER control lever position degree : 101.0	rack travel mm : 5.60 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 495 Tolerance 1/min : + 30 Rated speed rpm : 100 CRT mm min. : > 19.50 TORQUE CONTROL Rated speed rpm : 11.25 rack travel mm : 11.25 Tolerance mm : + 0.05 Rated speed rpm : 500 rack travel mm : 11.60 Tolerance mm : + 0.05 Rated speed rpm : 750 rack travel mm : 750 rack travel mm : 11.55

Rated speed rpm : 965 11.35 rack travel mm Tolerance mm : **←** 0.10 Start interlock FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa Rated speed rpm 750 Del. quantity cm3/1000 strokes : 87.5 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 4.0 STARTING FUEL DELIVERY Rated speed rpm 100 20.25 rack travel mm : **←** 0.75 Tolerance mm Del. quantity cm3/1000 strokes : 200.0 Tolerance cm3/1000 strokes : +- 8.0 Check tolerance cm3/1000s. : +- 11.0 LOW IDLE Rated speed rpm 375 Del. quantity cm3/1000 strokes : 21.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 4.5 : +-Spreed Tolerance 5.5 cm3/1000 strokes : Check tolerance cm3/1000s.9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 20,03,97 : ISO 4113

Combination No. : 0 400 876 437

Injection pump

Pump designation : PES6A95D32ORS2806 EP type number : 0 410 896 898

Governor

Governer design. : RSV375...1125A0C900R

Governer no.

: 0 420 233 353

Cust. part No.

: 8358 54720

Customer-spec. information Customer : SISU : 6200 Motor

Power KW : 88.0

TEST BENCH REQUIREMENTS

Inler line : 3.2

Test oil inlet

temp. °C

40

Tolerance *C

2.0

Overflow valve

: 1 417 413 000

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar

173.5

Tolerance bar

: +- 1.5

Test lines

: 1 680 750 014

Outside diameter :

6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm 2.55 : + 0.05Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

Beginning of delivery differende

Difference * CS :

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 9.05 : +- 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes :

74.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s.

3.0

Tolerance cm3/1000 strokes : 3.5	- Check tolerance - cm3/1000s. : 8.0
Check tolerance cm3/1000s. : 8.0	
	- CONTROL LEVER
Rated speed rpm : 375	- control lever - position degree : 90.0 - tolerance degree : +- 4.0
Rack travel in mm: 4.00	<u>-</u>
Tolerance mm : + 0.10	- RATED SPEED
Del. quantity cm3/1000 strokes : 14.0	- rack travel mm : 8.00 - Rated speed rpm : 1145
Tolerance	- Tolerance 1/min : +- 5
cm3/1000 strokes : +- 2.0	•
Check tolerance	rack travel mm : 4.00
cm3/1000s. : +- 4.5	- Rated speed rpm : 1195
Spreed	- Tolerance 1/min : +- 15
cm3/1000 strokes : 5.5	- - rack travel mm : 0.85
Check tolerance	- Tolerance mm : +- 0.55
cm3/1000s. : 9.0	- Rated speed rpm : 1350
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	- rack travel mm : 4.00 - Rated speed rpm : 1200 -
1	
GUIDE SLEEVE POSITION	- LOW IDLE
control lever	- - control lever
control lever position degree : -3	- - control lever - position degree : 71.0
control lever	- - control lever
control lever position degree : -3	control lever position degree : 71.0 tolerance degree : + 4.0 Setting point w/out bumper spring
control lever position degree : -3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20	control lever position degree : 71.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 375
control lever position degree : -3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	control lever position degree : 71.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 375 rack travel mm : 3.50
control lever position degree : -3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20	control lever position degree : 71.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 375
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	control lever position degree : 71.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 375 rack travel mm : 3.50
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	control lever position degree : 71.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 375 rack travel mm : 3.50 Tolerance mm : + 0.10 Testing: Rated speed rpm : 375
control lever position degree : -3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1100	control lever position degree : 71.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 375 rack travel mm : 3.50 Tolerance mm : + 0.10 Testing:
control lever position degree : -3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1100 Aneroid pressure	control lever position degree : 71.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 375 rack travel mm : 3.50 Tolerance mm : + 0.10 Testing: Rated speed rpm : 375 rack travel mm : 4.00 Tolerance mm : + 0.10
control lever position degree : -3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1100 Aneroid pressure hPa : -	control lever position degree : 71.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 375 rack travel mm : 3.50 Tolerance mm : + 0.10 Testing: Rated speed rpm : 375 rack travel mm : 4.00 Tolerance mm : + 0.10 rack travel mm : 2.00
control lever position degree : -3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1100 Aneroid pressure	control lever position degree : 71.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 375 rack travel mm : 3.50 Tolerance mm : + 0.10 Testing: Rated speed rpm : 375 rack travel mm : 4.00 Tolerance mm : + 0.10
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1100 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 74.0 Tolerance	control lever position degree : 71.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 375 rack travel mm : 3.50 Tolerance mm : + 0.10 Testing: Rated speed rpm : 375 rack travel mm : 4.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 455 Tolerance 1/min : + 30
control lever position degree : -3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1100 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 74.0 Tolerance cm3/1000 strokes : + 1.0	control lever position degree : 71.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 375 rack travel mm : 3.50 Tolerance mm : + 0.10 Testing: Rated speed rpm : 375 rack travel mm : 4.00 Tolerance mm : + 0.10 rack travel mm : 4.00 Tolerance mm : + 0.10
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1100 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 74.0 Tolerance	control lever position degree : 71.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 375 rack travel mm : 3.50 Tolerance mm : + 0.10 Testing: Rated speed rpm : 375 rack travel mm : 4.00 Tolerance mm : 4.00 Tolerance mm : 4.00 Tolerance mm : 4.00 Tolerance mm : 4.55 Tolerance 1/min : + 30

Rated speed rpm : 1100 rack travel mm : 9.05 Tolerance mm : +- 0.05

Rated speed rpm : 500 rack travel mm : 9.35 Tolerance mm : +- 0.05

Rated speed rpm : 980 rack travel mm : 9.00 Tolerance mm : +- 0.10

Start interlock

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : Rated speed rpm : 500

Del. quantity cm3/1000 strokes :

58.5

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : + 0.75

Del. quantity

cm3/1000 strokes : 200.0 Tolerance

cm3/1000 strokes : +-

Check tolerance cm3/1000s. : +- 11.0

LOW IDLE

Rated speed rpm : 375

Del. quantity

14.0

8.0

cm3/1000 strokes :

.

Tolerance

→ 2.0

cm3/1000 strokes Check tolerance

, _

cm3/1000s. Spreed +- 4.5

Tolerance

cm3/1000 strokes : 5.5

Check tolerance cm3/1000s.

: 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 26.03.97 Edition : ISO 4113 Test oil

Combination No. : F 002 A0Z 035

Injection pump

Pump designation : PES4A95D320/3RS2880

EP type number : 9 410 037 214

Governor

Governer design. : RSV475...1050ADC913R

Governer no. : F 002 A20 225

Cust. part No. : DEP: 3283693

Customer-spec. information

motor : CUMMINS-4BTA-3.9
Power KW : 77.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0
Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 Tolerance bar : +- 1.5

: 1 680 750 014 Test lines

Outside diameter : 6.0

x inside diameter : 2.0 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.45
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Toterance ma : +- 1.50

Firing order : 1-3-4-2

: 0-90-180-270 Phasing

Start of delivery blocking

*NW after s.o.d. : 6.50 : +- 0.10 Tolerance

Check

tolerance °NW : + 0.29

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm: 12.75 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 112.1

Tolerance

cm3/1000 strokes : +- 1.0

1	Check tolerance
Check tolerance	cm3/1000s. : +- 3.0
cm3/1000s. : +- 3.0	Spreed
+	Tolerance
Spreed +	cm3/1000 strokes : 4.0
+	Check tolerance
Tolerance	cm3/1000s. : 6.5
cm3/1000 strokes : 4.0 +	
Check tolerance	
cm3/1000s. : 6.5	CONTROL LEVER
. 0.5	CONTROL LEVER
	control lever
+	position degree : 103.0
Rated speed rpm : 475	tolerance degree : +- 4.0
· • • • • • • • • • • • • • • • • • • •	
Rack travel in mm: 5.60	RATED SPEED
Tolerance mm : +- 0.10	rack travel nam : 11.75
Del. quantity + cm3/1000 strokes : 20.5 +	Rated speed rpm : 1115
cm3/1000 strokes : 20.5	Tolerance 1/min : +- 5
cm3/1000 strokes : +- 2.0	rack travel mm : 5.90
Check tolerance	Rated speed rom : 1195
cn3/1000s. : +- 4.5	Tolerance 1/min : ÷ 5
Spreed	
Tolerance +	rack travel mm : 0.85
cm3/1000 strokes : 6.0 +	Tolerance mm : +- 0.55
Check tolerance +	Rated speed rpm : 1300
cm3/1000s. : 8.0	5 00
†	rack travel mm : 5.90
	Dated aread 110E
(B) SETTING OF THIECTION DIMP	Rated speed rpm : 1195
(B) SETTING OF INJECTION PUMP +	Rated speed rpm : 1195
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 1195
	Rated speed rpm : 1195
	Rated speed rpm : 1195 LOW IDLE
WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION	LOW IDLE
GUIDE SLEEVE POSITION control lever	LOW IDLE control lever position degree : 82.0
GUIDE SLEEVE POSITION control lever position degree : FREE	LOW IDLE
GUIDE SLEEVE POSITION control lever	LOW IDLE control lever position degree : 82.0 tolerance degree : + 4.0
GUIDE SLEEVE POSITION control lever position degree : FREE Rated speed rpm : 800	LOW IDLE control lever position degree : 82.0
GUIDE SLEEVE POSITION control lever position degree : FREE	LOW IDLE control lever position degree : 82.0 tolerance degree : + 4.0 Control lever difference Grad : 21.0
GUIDE SLEEVE POSITION control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerence mm : + 0.20	control lever position degree : 82.0 tolerance degree : + 4.0 Control lever difference Grad : 21.0 tolerance degree : + 6.0
GUIDE SLEEVE POSITION control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerence mm : + 0.20 governor spring	LOW IDLE control lever position degree : 82.0 tolerance degree : + 4.0 Control lever difference Grad : 21.0
GUIDE SLEEVE POSITION control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	control lever position degree : 82.0 tolerance degree : + 4.0 Control lever difference Grad : 21.0 tolerance degree : + 6.0 Setting point w/out bumper spring
GUIDE SLEEVE POSITION control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerence mm : + 0.20 governor spring	control lever position degree : 82.0 tolerance degree : + 4.0 Control lever difference Grad : 21.0 tolerance degree : + 6.0 Setting point w/out bumper spring Rated speed rpm : 475
GUIDE SLEEVE POSITION control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	control lever position degree : 82.0 tolerance degree : + 4.0 Control lever difference Grad : 21.0 tolerance degree : + 6.0 Setting point w/out bumper spring Rated speed rpm : 475 rack travel mm : 5.10
GUIDE SLEEVE POSITION control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.00	control lever position degree : 82.0 tolerance degree : + 4.0 Control lever difference Grad : 21.0 tolerance degree : + 6.0 Setting point w/out bumper spring Rated speed rpm : 475
GUIDE SLEEVE POSITION control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	control lever position degree : 82.0 tolerance degree : + 4.0 Control lever difference Grad : 21.0 tolerance degree : + 6.0 Setting point w/out bumper spring Rated speed rpm : 475 rack travel mm : 5.10 Tolerance mm : + 0.10
GUIDE SLEEVE POSITION control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.00 FULL LOAD DELIVERY AT FULL LOAD STOP	control lever position degree : 82.0 tolerance degree : + 4.0 Control lever difference Grad : 21.0 tolerance degree : + 6.0 Setting point w/out bumper spring Rated speed rpm : 475 rack travel mm : 5.10
GUIDE SLEEVE POSITION control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerunce mm : + 0.20 governor spring pre-tension click setting x : 2.00 FULL LOAD DELIVERY AT FULL LOAD STOP	control lever position degree : 82.0 tolerance degree : + 4.0 Control lever difference Grad : 21.0 tolerance degree : + 6.0 Setting point w/out bumper spring Rated speed rpm : 475 rack travel mm : 5.10 Tolerance mm : + 0.10 Testing:
GUIDE SLEEVE POSITION control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerunce mm : + 0.20 governor spring pre-tension click setting x : 2.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure hPa : 1000	control lever position degree : 82.0 tolerance degree : + 4.0 Control lever difference Grad : 21.0 tolerance degree : + 6.0 Setting point w/out bumper spring Rated speed rpm : 475 rack travel mm : 5.10 Tolerance mm : + 0.10 Testing: Rated speed rpm : 475 rack travel mm : 5.60
GUIDE SLEEVE POSITION control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure hPa : 1000 Del. quantity	control lever position degree : 82.0 tolerance degree : + 4.0 Control lever difference Grad : 21.0 tolerance degree : + 6.0 Setting point w/out bumper spring Rated speed rpm : 475 rack travel mm : 5.10 Tolerance mm : + 0.10 Testing: Rated speed rpm : 475
GUIDE SLEEVE POSITION control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerunce mm : + 0.20 governor spring pre-tension click setting x : 2.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 112.1	control lever position degree : 82.0 tolerance degree : + 4.0 Control lever difference Grad : 21.0 tolerance degree : + 6.0 Setting point w/out bumper spring Rated speed rpm : 475 rack travel mm : 5.10 Tolerance mm : + 0.10 Testing: Rated speed rpm : 475 rack travel mm : 5.60 Tolerance mm : 5.60 Tolerance mm : + 0.10
GUIDE SLEEVE POSITION control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 2.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050 Aneroid pressure hPa : 1000 Del. quantity	control lever position degree : 82.0 tolerance degree : + 4.0 Control lever difference Grad : 21.0 tolerance degree : + 6.0 Setting point w/out bumper spring Rated speed rpm : 475 rack travel mm : 5.10 Tolerance mm : + 0.10 Testing: Rated speed rpm : 475 rack travel mm : 5.60

Tolerance 1/min : +-30 Rated speed rpm 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm 1050 12.75 rack travel mm Tolerance mm : **←** 0.05 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm 500 Pressure hPa 1000 Pressure hPa 500 Rated speed rpm rack travel mm 11.20 : **←** 0.20 Tolerance mm MEASUREMENT Rated speed rpm 500 Pressure hPa 660 12.30 rack travel mm Tolerance mm : **←** 0.20 460 Fressure hPa 11.50 rack travel mm : **-** 0.20 Tolerance mm Start interlock FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa 500 Rated speed rpm Del. quantity 80.0 cm3/1000 strokes : Tolerance 1.0 cm3/1000 strokes : +-Check tolerance cm3/1000s. 3.0

Rated speed rpm rack travel mm Tolerance mm	:	+-	100 20.50 0.50
Del. quantity cm3/1000 strokes Tolerance	:		121.5
cm3/1000 strokes Check tolerance	:	+-	10.0
cm3/1000s.	:	+	15.0

LOW IDLE

Rated speed rpm Del. quantity			475
cm3/1000 strokes	:		20.5
Tolerance cm3/1000 strokes	:	+-	2.0
Check tolerance cm3/1000s. Spreed	:	+	4.5
Tolerance			
cm3/1000 strokes	:		6.0
Check tolerance cm3/1000s.	:		8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Combination No. : 0 402 746 611

Injection pump

Pump designation : PES6P120A320RS7372 EP type number : 0 412 726 940

Governor

Governer design. : RQV250...1400PA1279K

Governer no. : 0 421 815 508

Cust. part No. : 3866783

Customer-spec. information Customer : CDC : 6BTA Motor Power KW : 235.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C : +-2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0
Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

: 208.5 bar Tolerance bar

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

Prestroke mm : 4.00 Tolerance mm : + 0.05 Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240Tolerance : + 0.30

Check

tolerance *NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 11.00 Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm : 13.45

Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 186.5	+ Tolerance mm : + 0.25
Tolerance	Rated speed rpm : 1860 guide sleeve
cm3/1000 strokes : + 1.0	+ travel mm : 13.50
Cheek to leave	+ Tolerance mm : +- 0.50
Check tolerance cm3/1000s. : + 4.0	I
	FULL LOAD DELIVERY AT FULL LOAD STOP
Spreed	+ Rated speed rpm : 1400
Tolerance	Aneroid pressure
cm3/1000 strokes : 8.0	+ hPa : 1200
	+ Del. quantity
Check tolerance	+ cm3/1000 strokes : 186.5
cm3/1000s. : 12.0	† Tolerance
	+ cm3/1000 strokes : + 1.0
	+ Check tolerance
Rated speed rpm : 300	+ cm3/1000s. : + 4.0 + Spreed
rated speed (pill . 500	+ Tolerance
Rack travel in mm: 7.00	+ cm3/1000 strokes : 8.0
Tolerance mm : + 0.20	+ Check tolerance
Del. quantity	+ cm3/1000s. : 12.0
cm3/1000 strokes : 28.0	+
Tolerance	+
cm3/1000 strokes : + 3.0	+
Check tolerance	+ CONTROL LEVER
cm3/1000s. : + 5.0	†
Spreed Tolerance	t control lever
cm3/1000 strokes : 5.0	<pre>position degree : 118.5 tolerance degree : + 4.0</pre>
Check tolerance	toteralite degree . 7 4.0
cm3/1000s. : 8.0	+ RATED SPEED
	rack travel mm : 12.80
	+ Rated speed rpm : 1465
(B) SETTING OF INJECTION PUMP	† Tolerance 1/min : + 5
WITH GOVERNOR	†
	+ rack travel mm : 6.80 + Rated speed rpm : 1580
GUIDE SLEEVE TRAVEL	+ Raired speed rpm : 1580 + Tolerance 1/min : +- 15
GOINE SEEEAE IMAGE	+ Toterance Milling . The 13
Rated speed rpm : 1455	rack travel mm : 0.50
guide sleeve	† Tolerance mm : + 0.50
travel mm : 9.16	+ Rated speed rpm : 1725
Tolerance mm : + 0.15	†
Rated speed rpm : 275	I
guide sleeve	
travel mm : 1.39	LOW IDLE
Tolerance mm : + 0.20	+
	†
Rated speed rpm : 931	the control lever
guide steeve	position degree : 74.5
travel mm : 5.67	tolerance degree : +- 4.0
Tolerance mm : + 0.25	† + Control lever difference
Rated speed rpm : 480	+ Grad : 44.0
guide sleeve	tolerance degree : + 6.0
travel mm ; 3.18	+
	•

Testing:		+ Check
Rated speed rpm	• 300	<pre>speed 1/min : > 80 Check</pre>
rack travel mm Tolerance mm	7.00	speed 1/min : < 250
Tolerance mm	: ← 0.20	+
Rated speed rpm	: 200	+ FUEL DELIVERY CHARACTERISTICS
		+
CRT mm min.	: > 8.60	+ Aneroid pressure + hPa : 1200
Rated speed rpm	: 350	Rated speed rpm : 1000
· · · · · · · · · · · · · · · · · · ·		→ Del. quantity
TODALIT CONTROL		+ cm3/1000 strokes : 178.0
TORQUE CONTROL		+ Tolerance + cm3/1000 strokes : +- 3.0
Rated speed rpm	: 1400	+ Check tolerance
rack travel mm	: 13.45	+ cm3/1000s. : +- 6.0
Tolerance ma	: +- 0.05	Spreed
Dotad speed	. 1000	+ Tolerance
Rated speed rpm	: 13.20	+ cm3/1000 strokes : 8.0 + Check tolerance
rack travel mm Tolerance mm	: + 0.10	cm3/1000s. : 12.0
		+
Rated speed rpm rack travel mm Tolerance mm	: 700	+ Aneroid pressure
rack travel mm	13.00	+ hPa : - + Rated speed rpm : 1000
roterance mm	. + 0.20	+ Del. quantity
		+ cm3/1000 strokes : 98.5
ANEROID/ALTITUDE		+ Tolerance
COMPENSATOR TEST		+ cm3/1000 strokes : + 1.0
		+ Check tolerance + cm3/1000s. : + 3.0
SETTING		T (III) 10003
Rated speed rpm	• 1/.00	†
Pressure hPa	: 1200	T STARTING FUEL DELIVERY
		+
Pressure hPa	: -	+ Rated speed rpm : 100
Rated speed rpm	: 1000	+ rack travel mm : 21.00 + Tolerance mm : + 0.50
rack travel mm Tolerance mm	: + 0.20	+ Del. quantity
		+ cm3/1000 strokes : 170.5
MEASUREMENT		+ Tolerance
Dated around are	. 1/00	+ cm3/1000 strokes : + 20.0
Rated speed rpm	: 1400	- Check tolerance - cm3/1000s. : + 25.0
Pressure hPa	: 620	+ 11137 10630.
rack travel mm Tolerance mm	: 12.40	}
Tolerance mm	: ← 0.20	+
Pressure hPa	. 280	LOW IDLE
rack travel mm	: 10.70	+
Tolerance mm	: ← 0.20	+ Rated speed rpm : 300
بامدالمحمدة المساهمة		+ Del. quantity
Start interlock		cm3/1000 strokes : 28.0 Tolerance
Rated speed rpm	: > 100	cm3/1000 strokes : +- 3.0
Rated speed rpm Rated speed rpm	: < 240	+ Check tolerance
		+ cm3/1000s. : +- 5.0

Tolerance cm3/1000 strokes : Check tolerance cm3/1000s. : 5.0

8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 17.03.97

Test oil

: ISO 4113

Combination No. : 0 402 746 612

Injection pump

Pump designation : PES6P120A320RS7372

EP type number : 0 412 726 940

Governor

Governer design. : RQV250...1300PA1282K

Governer no. : 0 421 815 515

Cust. part No. : 3866784

Customer-spec. information

Customer : CDC

Motor

: 6BTA

Power KW

: 187.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

Tolerance *C

40

: +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : +- 0.1

Test nozzle holde

assembly

: 1 688 901 103

Opening pressure

bar

: 208.5

Tolerance bar

: +- 1.5

Test Lines : 1 680 750 915

Outside diameter : 6.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : 1.0 → 1.0

Prestroke mm : 4.00 Tolerance mm : + 0.05

Check

tolerance mm : \div 0.10

Rack travel in mm: 10.50

Tolerance mm : \leftarrow 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240
Tolerance : +- 0.30

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Start of delivery blocking

*NW after s.o.d. : 11.00

Tolerance

: +- 0.50

Check

tolerance *NW

: **←** 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm: 12.45

Tolerance mm : + 0.05

F01

Del. quantity cm3/1000 strokes	: 158.5	Tolerance mm : +- 0.25
Tolerance	<u> </u>	Rated speed rpm : 1860 guide sleeve
cm3/1000 strokes	: ← 1.0 +	travel mm : 13.50
	+	Tolerance mm : +- 0.50
Check tolerance cm3/1000s.	: + 4.0 +	
		FULL LOAD DELIVERY AT FULL LOAD STOP
Spreed	+	
	+	Rated speed rpm : 1300
Tolerance	+	Aneroid pressure
cm3/1000 strokes	: 8.0	hPa : 1200
	}	Del. quantity
Check tolerance	-	cm3/1000 strokes : 158.5
cm3/1000s.	: 12.0	Tolerance
	1	cm3/1000 strokes : +- 1.0
		Check tolerance
	\mathbf{I}	cm3/1000s. : +- 4.0
Rated speed rpm	: 300	
naturu spektu ipiti	: 300	Spreed
Book Americal du am		Tolerance
Rack travel in mm		cm3/1000 strokes : 8.0
Tolerance mm	: + 0.20 +	Check tolerance
Del. quantity	†	cm3/1000s. : 12.0
cm3/1000 strokes	: 26.0 +	
Tolerance	+	
cm3/1000 strokes	: ← 3.0 +	
Check tolerance	+	CONTROL LEVER
cm3/1000s.	: + 5.0 +	
Spreed	+	control lever
Tolerance	<u>.</u> }-	position degree : 116.0
cm3/1000 strokes	: 5.0	tolerance degree : +- 4.0
Check tolerance	1	
cm3/1000s.	: 8.0	RATED SPEED
	1	rack travel mm : 11.45
	<u> </u>	Rated speed rpm : 1375
(B) SETTING OF IN	LIECTION PLIMP	Tolerance 1/min : + 5
WITH GOVERNOR	1	
W2111 33121 WIGH	1	rack travel mm : 7.50
		Rated speed rpm : 1465
GUIDE SLEEVE TRAV	ı _{Fl} I	Tolerance 1/min : +- 15
AATAF OFFFAT IIVAA	<u> </u>	TOTAL TABLET . 1 13
Rated speed rpm	: 1355	rack travel mm : 0.50
guide sleeve	· 1333	Tolerance mm : +- 0.50
travel mm	: 8.32	Rated speed rpm : 1650
Tolerance mm	: + 0.15	varen sheen thiii . 1000
TOCCI GITLE INTO	· · · · · · · · · · · · · · · · · · ·	
Rated speed rpm	: 275	
guide sleeve	• • • • • • • • • • • • • • • • • • • •	
travel mm	: 1.39	LOW IDLE
		FOM INFE
Tolerance mm	: +- 0.20	
Datad anaad ass	. 985	antel laver
Rated speed rpm	: 885 +	control lever
guide sleeve	· · · · · · · · · · · · · · · · · · ·	position degree : 81.0
travel mm	5.46	tolerance degree : +- 4.0
Tolerance mm	: + 0.25 +	
-	+	Control lever difference
Rated speed rpm	: 480 +	Grad : 35.0
guide sleeve	+	tolerance degree : +- 6.0
travel mm	: 3.18 +	

Testing:	
Roted speed rpm rack travel mm Tolerance mm	: 300 : 6.80 : + 0.20
Rated speed rpm	: 250
CRT mm min.	: > 8.00
Rated speed rpm	: 450
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1300 : 12.45 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 900 : 12.10 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 700 : 12.15 : +- 0.10
Rated speed rpm rack travel mm Tolerance mm	: 500 : 11.90 : + 0.20
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 1300 : 1200
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 1000 : 9.45 : + 0.20
MEASUREMENT	
Rated speed rpm	: 1300
Pressure hPa rack travel mm Tolerance mm	: 600 : 11.50 : + 0.20
Pressure hPa rack travel mm Tolerance mm	: 255 : 10.00 : + 0.20

Rated speed rpm	: < 250
Check speed 1/min	: < 260
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	
Check tolerance cm3/1000s.	: +- 6.0
Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 8.0 : 12.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: - : 1000 : 94.5 : + 1.0 : + 3.0
STARTING FUEL DEL	TVERY
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
LOW IDLE	
Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: 300 : 26.0 : ← 3.0 : ← 5.0

Start interlock

Tolerance : 5.0 Check tolerance cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adiustment instructions. See microcard(s) W400/...

Edition : 20.03.97 : ISO 4113 Test oil

Combination No. : F 002 AOZ 023

Injection pump

Pump designation : PES6A95D320/3RS2881

EP type number : 9 410 037 215

Governor

Governer design. : RSV500...1000A0C895R

Governer no. : F 002 A20 217

Cust. part No. : 3929405

Customer-spec. information Customer : CDC Motor : 6BT Power KW : 104.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance °C

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05

Check

: +- 0.10 tolerance mm

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240
Tolerance : + 0.50

Check

tolerance $^{\circ}NW$: +- 0.75

Start of delivery blocking

*NW after s.o.d. : 7.00 Tolerance : **←** 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 11.95 Tolerance mm : + 0.05

F05

		+ Aneroid pressure	
Del. quantity cm3/1000 strokes	: 101.0	hPa Del. quantity	: 900
		+ cm3/1000 strokes	: 101.0
Tolerance cm3/1000 strokes	: + 1.0	+ Tolerance + cm3/1000 strokes + Check tolerance	: + 1.0
Check tolerance cm3/1000s.	: + 3.0	+ cm3/1000s. + Spreed	: + 3.0
Spreed		Tolerance cm3/1000 strokes Check tolerance	: 3.5
Tolerance cm3/1000 strokes	: 3.5	- cm3/1000s.	: 6.0
		+	
Check tolerance cm3/1000s.	: 6.0	CONTROL LEVER	
		T control lever	
		+ position degree	: 91.0
Rated speed rpm	: 500	+ tolerance degree	: +- 4.0
Rack travel in mm	: 5.30	+ RATED SPEED	
Tolerance mm	: +- 0.10	rack travel mm	: 10.90
Del. quantity	- · · -	Rated speed rpm	: 1065
cm3/1000 strokes Tolerance	: 18.5	Tolerance 1/min	: +- 5
cm3/1000 strokes	; +- 2.0	rack travel mm	: 5.70
Check tolerance		+ Rated speed rpm	: 1110
cm3/1000s.	: +- 4.5	+ Tolerance 1/min	: +- 5
Spreed		+	•
Tolerance		+ rack travel mm	: 0.85
cm3/1000 strokes	: 3.5	† Tolerance mm	: + 0.55
Check tolerance		+ Rated speed rpm	: 1250
cm3/1000s.	: 5.5	+	5 75
		rack travel mm	: 5.70 : 1110
(B) SETTING OF INJ WITH GOVERNOR	ECTION PUMP	Rated speed rpm	: 1110
GUIDE SLEEVE POSIT	TON	LOW IDLE	V = 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1
MOTOE STEENE LOST!	1014	Ī	
		control lever	
control lever	_	+ position degree	
position degree	: - 3	+ tolerance degree	: ← 4.0
Rated speed rpm	: 800	+ Control Lever dif	fanores
Rack travel in mm	: 0.50	+ Control Lever diff	terence : 17.0
	: +- 0.20	tolerance degree	
governor spring		Setting point w/o	ut bumper spi
pre-tension click setting x	. 250	I Pated speed ma-	: 500
LLICK SELLING X	. 2	+ Rated speed rpm - rack travel mm	: 500
		Tolerance mm	: +- 0.10
FULL LOAD DELIVERY	AT FULL LOAD STOP	+	5.15
~	4000	† Testing:	
Rated speed rpm	: 1000	+	

spring

Rated speed rpm : 1000

Rated speed rpm rack travel mm Tolerance mm	: 500 : 5.30 : ← 0.10
Rated speed rpm	: 100
CRT mm min.	: > 19.00
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 11.95 : + 0.05
Rated speed rpm	: 800
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 500 : 900
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 530 : 11.75 : ← 0.05
Start interlock	
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	· -
Rated speed rpm Del. quantity	: 800
cm3/1000 strokes Tolerance	: 98.0
cm3/1000 strokes	: + 1.0
Check tolerance cm3/1000s.	: ← 3.0

Rated speed rpm rack travel mm Tolerance mm	: +-	100 20.50 0.50
Del. quantity cm3/1000 strokes Tolerance	:	120.5
cm3/1000 strokes Check tolerance	: +-	10.0
cm3/1000s.	: +-	15.0

LOW IDLE		
Rated speed rpm Del. quantity	: 5	00
cm3/1000 strokes Tolerance	:	18.5
cm3/1000 strokes Check tolerance	: +	2.0
cm3/1000s.	: +-	4.5
Tolerance		7.5
cm3/1000 strokes Check tolerance	ž	3.5
cm3/1000s.	:	5.5

End of test specification sheet

STARTING FUEL DELIVERY

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 01.04.97 : ISO 4113 Edition Test oil

Combination No. : 0 402 746 617

Injection pump

Pump designation: PES6P120A720RS7423

EP type number : 0 412 726 963

Governor

Governer design. : RQV325...975PA909

: 0 421 815 531 Governer no.

Cust. part No. : 313GC5224-P10

Customer-spec. information Customer : MACK Motor : EN7300A Power KW : 223.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance *C : +- 2.0

Overflow valve : 2 417 413 084

Inlet press. bar : 2.8 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.80 Tolerance mm : +- 0.05 Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.00

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

Tolerance : + 0.30

Check

tolerance *NW : +- 0.75

Start of delivery blocking

: + - 0.50Tolerance

Check

tolerance *NW : **←** 0.75

Barrel no. : 1

BASIC SETTING

975 Rated speed rpm :

Rack travel in mm: 12.55 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 202.0

Tolerance cm3/1000 strokes : +- 1.0	+ guide sleeve + travel mm : 13.50 + Tolerance mm : + 0.50
Check tolerance cm3/1000s. : + 4.0	
Spreed	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance cm3/1000 strokes : 5.0	+ Rated speed rpm : 975 + Aneroid pressure + hPa : 1200 + Del. quantity
Check tolerance cm3/1000s. : 9.0	- cm3/1000 strokes : 202.0 - Tolerance - cm3/1000 strokes : + 1.0
Rated speed rpm : 325	+ Check tolerance + cm3/1000s. : + 4.0 + Spreed + Tolerance
Rack travel in mm : 5.30 Tolerance mm : + 0.10	cm3/1000 strokes : 5.0 + Check tolerance
Del. quantity cm3/1000 strokes : 44.0 Tolerance	+ cm3/1000s. : 9.0
cm3/1000 strokes : + 3.0 Check colerance cm3/1000s. : + 5.0	CONTROL LEVER
Spreed Tolerance cm3/1000 strokes : 8.0	control lever position degree : 106.0 tolerance degree : + 4.0
Check tolerance cm3/1000s. : 12.0	RATED SPEED
(B) SETTING OF INJECTION PUMP	rack travel mm : 11.60 Rated speed rpm : 1020 Tolerance 1/min : + 5
WITH GOVERNOR	Check + speed 1/min : + 10
GUIDE SLEEVE TRAVEL	+ rack travel mm : 4.00
Rated speed rpm : 1030 guide sleeve	Rated speed rpm : 1175 Tolerance 1/min : + 15 Check
travel mm : 8.84 Tolerance mm : + 0.15	+ speed 1/min : +- 20 + rack travel mm : 0.50
Rated speed rpm : 325 guide sleeve travel mm : 1.27	Tolerance mm : + 0.50 Rated speed rpm : 1250
Tolerance mm : + 0.20	
Rated speed rpm : 524 guide sleeve travel mm : 3.30	LOW IDLE
Tolerance mm : + 0.25	control lever
Rated speed rpm : 390 guide sleeve travel mm : 2.30	+ position degree : 61.5 + tolerance degree : + 4.0 +
Tolerance mm : +- 0.25	Testing:
Rated speed rpm : 1430	+ Rated speed rpm : 325

rack travel mm Tolerance mm		theck speed 1/min : < 285
Rated speed rpm	: 275	FUEL DELIVERY CHARACTERISTICS
CRT mm min.	: > 6.50	Aneroid pressure
Rated speed rpm	: 400	hPa : 1200 Rated speed rpm : 600 Del. quantity
TORQUE CONTROL		- cm3/1000 strokes : 221.5 - Tolerance
Rated speed rpm rack travel mm	: 12.55	cm3/1000 strokes : + 3.0 Check tolerance
Tolerance mm		+ cm3/1000s. : +- 6.0 + Spreed
Rated speed rpm rack travel mm	: 600 : 12.00	+ Tolerance + cm3/1000 strokes : 8.0
rack travel mm Tolerance mm	: + 0.10	+ Check tolerance + cm3/1000s. : 12.0
Rated speed rpm rack travel mm	: 500	Aneroid pressure
Tolerance mm		hPa : -
		Rated speed rpm : 400
ANEROID/ALTITUDE COMPENSATOR TEST		+ Del. quantity + cm3/1000 strokes : 148.0 + Tolerance
		cm3/1000 strokes : + 2.0 Check tolerance
SETTING		- cm3/1000s. : + 4.0
Rated speed rpm Pressure hPa		+ _
rack travel mm		STARTING FUEL DELIVERY
Tolerance mm		Rated speed rpm : 100
Pressure hPa	: -	rack travel mm : 10.80
Rated speed rpm	: 975	† Tolerance mm : + 1.00
rack travel mm		+ Del. quantity
Tolerance mm MEASUREMENT	: 0. 20	+ cm3/1000 strokes : 205.0 + Tolerance + cm3/1000 strokes : +- 20.0
MEASUREMENT		Check tolerance
Rated speed rpm		
Pressure hPa	: 460_	†
rack travel mm	: 11.15	+
Tolerance mm	: +- 0.20	LOW IDLE
Pressure hPa	: 235	725
rack travel mm Tolerance mm	: 9.25 : + 0.05	Rated speed rpm : 325
	: +- 0.05	Del. quantity cm3/1000 strokes : 44.0
Start interlock	400	+ Tolerance + cm3/1000 strokes : +- 3.0
Rated speed rpm Rated speed rpm		+ Check tolerance + cm3/1000S. : + 5.0 + Spreed
Check speed 1/min	: > 80	Tolerance : 8.0

Check tolerance cm3/1000s.	:	12.0	

End of test specification sheet

F11

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 01.04.97 Test oil : ISO 4113

Combination No. : 0 402 746 618

Injection pump

Pump designation : PES6P120A720RS7423 EP type number : 0 412 726 963

Governor

Governer design. : RQV325...875PA909

: 0 421 815 532 Governer no.

Cust. part No. : 313GC5224-P6

Customer-spec. information Customer : MACK : EMN7300 Motor : 223.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

40 temp. °C Tolerance °C : + 2.0

Overflow valve : 2 413 359 008

Inlet press. bar : 2.8 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 ber Tolerance bar : + 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.80
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.00

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 : + 0.30 Phasing

Tolerance

Check

tolerance *NW : +- 0.75

Start of delivery blocking

Tolerance : **←** 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 875

Rack travel in mm: 12.85 Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 212.5

	+ Rated speed rpm : 1350
Tolerance	guide sleeve
cm3/1000 strokes : + 1.0	† travel mm : 13.50
Check tolerance	Tolerance mm : + 0.50
cm3/1000s. : +- 4.0	I
, , , , , , , , , , , , , , , , , , ,	FULL LOAD DELIVERY AT FULL LOAD STOP
Spreed	+
	+ Rated speed rpm : 875
Tolerance	+ Aneroid pressure
cm3/1000 strokes : 5.0	+ hPa : 1200
Charle to language	Del. quantity
Check tolerance cm3/1000s. : 9.0	+ cm3/1000 strokes : 212.5 + Tolerance
CIID7 (0003 9.0	+ cm3/1000 strokes : + 1.0
The same of the sa	Check tolerance
•	+ cm3/1000s. : + 4.0
Rated speed rpm : 325	Spreed
	+ Tolerance
Rack travel in mm: 5.00	cm3/1000 strokes : 5.0
Tolerance mm : + 0.10	+ Check tolerance
Del. quantity	+ cm3/1000S. : 9.0
cm3/1000 strokes : 44.0 Tolerance	<u>†</u>
cm3/1000 strokes : + 3.0	I
Check tolerance	CONTROL LEVER
cm3/1000s. : +- 5.0	-
Spreed	control lever
Tolerance	position degree : 109.5
cm3/1000 strokes : 8.0	tolerance degree : + 4.0
Check tolerance	TATED COTED
cm3/1000s. : 12.0	+ RATED SPEED + rack travel mm : 11.85
	Rated speed rpm : 920
(B) SETTING OF INJECTION PUMP	+ Tolerance 1/min : + 5
WITH GOVERNOR	+ Check
	+ speed 1/min : +- 10
CUIDE OF FOUR TONIES	†
GUIDE SLEEVE TRAVEL	+ rack travel mm : 4.00 + Rated speed rpm : 1075
Rated speed rpm : 931	Tolerance 1/min : +- 15
guide sleeve	+ Check
travel mm : 8.41	- speed 1/min : +- 20
Tolerance mm : + 0.15	+
	rack travel mm : 0.50
Rated speed rpm : 325	Tolerance mm : + 0.50
guide sleeve	Rated speed rpm : 1200
travel mm : 1.79 Tolerance mm : +- 0.20	Ţ
Toter arice mail . The 0.20	I
Rated speed rpm : 754	
guide sleeve	LOW IDLE
travel mm : 6.98	+
Tolerance mm : + 0.25	+
	control lever
Rated speed rpm : 520	position degree : 62.5
guide sleeve : 4.05	tolerance degree : +- 4.0
Tolerance mm : +- 0.25	† - Testing:
TOCCI OFFICE HERE . FE U.C.)	T resume.

Rated speed rpm rack travel mm Tolerance mm	: 325 : 5.00 : ← 0.10	‡	Check speed 1/min	: < 285
Rated speed rpm	: 225	Ŧ	FUEL DELIVERY CHA	RACTERISTICS
CRT mm min.	: > 6.50	+	Aneroid pressure	: 1200
Rated speed rpm	: 425	‡	Rated speed rpm Del. quantity	: 510
TORQUE CONTROL		+	cm3/1000 strokes Tolerance	
Rated speed rpm rack travel mm Tolerance mm	: 12.85	‡	cm3/1000 strokes Check tolerance cm3/1000s. Spreed	
Rated speed rpm rack travel am Tolerance mm	: 14.05	‡	Tolerance cm3/1000 strokes Check tolerance cm3/1000S.	
Rated speed rpm rack travel mm Tolerance mm	: 400 : 13.50 : + 0.20	‡	Aneroid pressure hPa Rated speed rpm Del. quantity	
ANEROID/ALTITUDE COMPENSATOR TEST			cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: +- 2.0
SETTING		‡	cm3/1000s.	: +- 4.0
Rated speed rpm Pressure hPa	: 510 : 1200	+	STARTING FUEL DEL	IVERY
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 8.40	† † † †	Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes	: 11.30 : + 1.00
MEASUREMENT	540	+	Tolerance cm3/1000 strokes	
Rated speed rpm Pressure hPa rack travel nm		1	Check tolerance cm3/1000S.	: +- 25.0
Tolerance mm		1		
Pressure hPa rack travel mm Tolerance mm	: 370 : 9.90 : ← 0.05	 	LOW IDLE Rated speed rpm	: 325
Start interlock		Ī	Del. quantity cm3/1000 strokes Tolerance	: 44.0
Rated speed rpm Rated speed rpm	: > 100 : < 275	1	cm3/1000 strokes Check tolerance	
Check speed 1/min		+++++++++++++++++++++++++++++++++++++++	cm3/1000S. Spreed Tolerance	
		+	cm3/1000 strokes	: 8.0

Check tolerance cm3/1000s.	:	12.0

End of test specification sheet

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 01.04.97 Test oil : ISO 4113

Combination No. : 0 402 746 626

Injection pump

Pump designation : PES6P120A720RS7424

EP type number : 0 412 726 964

Governor

Governer design. : RQV325...975PA944

: K

Governer no. : 0 421 815 540

Cust. part No. : 313GC5223-P6

Customer—spec. information
Customer : MACK

Motor : E7-250A Power KW : 180.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 413 359 008

Inlet press. bar : 2.8
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

4 444 750 444

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm : 3.30 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 12.00 Tolerance mm : + 1.00

The state of the s

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Tolerance : + 0.30

Check

tolerance $^{\circ}NW$: \leftarrow 0.50

Start of delivery blocking

Tolerance : \leftarrow 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 975

Rack travel in mm : 12.95
Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 270.5

Tolerance cm3/1000 strokes : +- 1.0	<pre>+ guide sleeve + travel mm : 13.50 + Tolerance mm : +- 0.50</pre>
Check tolerance cm3/1000s. : +- 4.0	FULL LOAD DELTWEDY AT FULL LOAD STOR
Spreed	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance cm3/1000 strokes : 5.0	+ Rated speed rpm : 975 + Aneroid pressure + hPa : 1200 + Del. quantity
Check tolerance cm3/1000s. : 9.0	cm3/1000 strokes : 270.5 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Rated speed rpm : 340	+ cm3/1000S. : +- 4.ປ + Spreed + Tolerance
Rack travel in mm : 4.90 Tolerance mm : +- 0.10 Del. quantity	- cm3/1000 strokes : 5.0 - Check tolerance - cm3/1000s. : 9.0
cm3/1000 strokes : 40.0 Tolerance cm3/1000 strokes : +- 3.0	‡
Check tolerance cm3/1000s. : +- 5.0 Spreed	CONTROL LEVER
Tolerance cm3/1000 strokes : 8.0	position degree : 111.0 tolerance degree : +- 4.0
Check tolerance : 12.0	RATED SPEED + rack travel mm : 11.90
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	+ Rated speed rpm : 1020 + Tolerance 1/min : +- 5 + Check + speed 1/min : +- 10
GUIDE SLEEVE TRAVEL	+ + rack travel mm : 4.00 + Rated speed rpm : 1190
Rated speed rpm : 1031 guide sleeve travel mm : 8.91	Tolerance 1/min : +- 15 + Check + speed 1/min : +- 20
Tolerance mm : + G.15 Rated speed rpm : 340	+ rack travel mm : 0.50 + Tolerance mm : +- 0.50
guide sleeve travel mm : 2.25 Tolerance mm : + 0.20	Rated speed rpm : 1300
Rated speed rpm : 882	101 701 5
guide sleeve travel mm : 7.70 Tolerance mm : +- 0.25	LOW IDLE
Rated speed rpm : 590 guide sleeve travel mm : 4.37	control leverposition degree : 63.0tolerance degree : +- 4.0
travel mm : 4.37 Tolerance mm : + 0.25	Testing:
Rated speed rpm : 1430	Rated speed rpm : 340

rack travel mm	: 4.90	+ Check
Tolerance mm	: +- 0.10	+ speed 1/min : < 255
		
Rated speed rpm	: 265	
·		+ FUEL DELIVERY CHARACTERISTICS
CRT mm min.	: > 6.50	+
		Aneroid pressure
Rated speed rpm	: 425	+ hPa : 1200
	1,23	Rated speed rpm : 600
		
TORQUE CONTROL		+ cm3/1000 strokes : 303.0
TORROL CONTROL		Tolerance
Rated speed rpm	• 975	+ cm3/1000 strokes : +- 3.0
rack travel mm		+ Check tolerance
Tolerance mm		
roceratice mm	: 0.05	+ cm3/1000s. : +- 6.0
Dated as and one	.	Spreed
Rated speed rpm		Tolerance
rack travel mm	: 12.60	+ cm3/1000 strokes : 8.0
Tolerance mm	: ← 0.10	+ Check tolerance
-	*	+ cm3/1000s. : 12.0
Rated speed rpm	: 500	†
rack travel mm	: 11.80	+ Aneroid pressure
Tolerance mm	: ← 0.20	+ hPa : -
		+ Rated speed rpm : 400
ANEROID/ALTITUDE		+ cm3/1000 strokes : 191.0
COMPENSATOR TEST		† Tolerance
		+ cm3/1000 strokes : +- 2.0
		+ Check tolerance
SETTING		+ cm:3/1000s. : +- 4.0
		+
Rated speed rpm	: 975	‡
Pressure hPa	: 1200	
Pressure hPa rack travel mm	: 1200 : 12.95	STARTING FUEL DELIVERY
Pressure hPa rack travel mm	: 1200 : 12.95	STARTING FUEL DELIVERY
Pressure hPa	: 1200 : 12.95	+
Pressure hPa rack travel mm Tolerance mm;	: 1200 : 12.95	Rated speed rpm : 100
Pressure hPa rack travel mm Tolerance mm Pressure hPa	: 1200 : 12.95 : + 0.05	Rated speed rpm : 100 rack travel mm : 20.00
Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm	: 1200 : 12.95 : + 0.05 : - : 975	Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : +- 1.00
Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm	: 1200 : 12.95 : + 0.05 : - : 975 : 9.05	Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : +- 1.00 Del. quantity
Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm	: 1200 : 12.95 : + 0.05 : - : 975	Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : +- 1.00 Del. quantity sm3/1000 strokes : 180.0
Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 1200 : 12.95 : + 0.05 : - : 975 : 9.05	Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : +- 1.00 Del. quantity sm3/1000 strokes : 180.0 Tolerance
Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm	: 1200 : 12.95 : + 0.05 : - : 975 : 9.05	Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : +- 1.00 Del. quantity cm3/1000 strokes : 180.0 Tolerance cm3/1000 strokes : +- 20.0
Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT	: 1200 : 12.95 : + 0.05 : - 975 : 9.05 : + 0.20	Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : +- 1.00 Del. quantity cm3/1000 strokes : 180.0 Tolerance cm3/1000 strokes : +- 20.0 Check tolerance
Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 1200 : 12.95 : + 0.05 : - 975 : 9.05 : + 0.20	Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : +- 1.00 Del. quantity cm3/1000 strokes : 180.0 Tolerance cm3/1000 strokes : +- 20.0
Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm	: 1200 : 12.95 : ← 0.05 : ← 975 : 9.05 : ← 0.20 : 975	Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : +- 1.00 Del. quantity cm3/1000 strokes : 180.0 Tolerance cm3/1000 strokes : +- 20.0 Check tolerance
Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa	: 1200 : 12.95 : ← 0.05 : ← 0.05 : 975 : 9.05 : ← 0.20 : 975 : 590	Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : +- 1.00 Del. quantity cm3/1000 strokes : 180.0 Tolerance cm3/1000 strokes : +- 20.0 Check tolerance
Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm	: 1200 : 12.95 : + 0.05 : - 975 : 9.05 : + 0.20 : 975 : 590 : 11.60	Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : +- 1.00 Del. quantity cm3/1000 strokes : 180.0 Tolerance cm3/1000 strokes : +- 20.0 Check tolerance
Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa	: 1200 : 12.95 : ← 0.05 : ← 0.05 : 975 : 9.05 : ← 0.20 : 975 : 590	Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : +- 1.00 Del. quantity sm3/1000 strokes : 180.0 Tolerance cm3/1000 strokes : +- 20.0 Check tolerance cm3/1000s. : +- 30.0
Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1200 : 12.95 : + 0.05 : - 975 : 9.05 : + 0.20 : 975 : 590 : 11.60 : + 0.20	Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : +- 1.00 Del. quantity cm3/1000 strokes : 180.0 Tolerance cm3/1000 strokes : +- 20.0 Check tolerance
Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa	: 1200 : 12.95 : ← 0.05 : ← 0.05 : 975 : 9.05 : ← 0.20 : 975 : 590 : 11.60 : ← 0.20 : 330	Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : +- 1.00 Del. quantity sm3/1000 strokes : 180.0 Tolerance cm3/1000 strokes : +- 20.0 Check tolerance cm3/1000s. : +- 30.0
Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: 1200 : 12.95 : ← 0.05 : ← 0.05 : 975 : 9.05 : ← 0.20 : 975 : 590 : 11.60 : ← 0.20 : 330 : 9.75	Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : +- 1.00 Del. quantity sm3/1000 strokes : 180.0 Tolerance cm3/1000 strokes : +- 20.0 Check tolerance cm3/1000s. : +- 30.0 LOW IDLE Rated speed rpm : 340
Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa	: 1200 : 12.95 : ← 0.05 : ← 0.05 : 975 : 9.05 : ← 0.20 : 975 : 590 : 11.60 : ← 0.20 : 330	Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : +- 1.00 Del. quantity cm3/1000 strokes : 180.0 Tolerance cm3/1000 strokes : +- 20.0 Check tolerance cm3/1000s. : +- 30.0 LOW IDLE Rated speed rpm : 340 Del. quantity
Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: 1200 : 12.95 : ← 0.05 : ← 0.05 : 975 : 9.05 : ← 0.20 : 975 : 590 : 11.60 : ← 0.20 : 330 : 9.75	Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : +- 1.00 Del. quantity cm3/1000 strokes : 180.0 Tolerance cm3/1000 strokes : +- 20.0 Check tolerance cm3/1000s. : +- 30.0 LOW IDLE Rated speed rpm : 340 Del. quantity cm3/1000 strokes : 40.0
Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: 1200 : 12.95 : ← 0.05 : ← 0.05 : 975 : 9.05 : ← 0.20 : 975 : 590 : 11.60 : ← 0.20 : 330 : 9.75	Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : +- 1.00 Del. quantity cm3/1000 strokes : 180.0 Tolerance cm3/1000 strokes : +- 20.0 Check tolerance cm3/1000s. : +- 30.0 LOW IDLE Rated speed rpm : 340 Del. quantity cm3/1000 strokes : 40.0 Tolerance
Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Start interlock	: 1200 : 12.95 : + 0.05 : - : 975 : 9.05 : + 0.20 : 975 : 590 : 11.60 : + 0.20 : 330 : 9.75 : + 0.05	Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00 Del. quantity cm3/1000 strokes : 180.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 30.0 LOW IDLE Rated speed rpm : 340 Del. quantity cm3/1000 strokes : 40.0 Tolerance cm3/1000 strokes : + 3.0
Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Start interlock Rated speed rpm	: 1200 : 12.95 : + 0.05 : - 975 : 975 : 9.05 : + 0.20 : 975 : 590 : 11.60 : + 0.20 : 330 : 9.75 : + 0.05	Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00 Del. quantity sm3/1000 strokes : 180.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 30.0 LOW IDLE Rated speed rpm : 340 Del. quantity cm3/1000 strokes : 40.0 Tolerance cm3/1000 strokes : 40.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance
Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Start interlock	: 1200 : 12.95 : + 0.05 : - 975 : 975 : 9.05 : + 0.20 : 975 : 590 : 11.60 : + 0.20 : 330 : 9.75 : + 0.05	Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00 Del. quantity cm3/1000 strokes : 180.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 30.0 LOW IDLE Rated speed rpm : 340 Del. quantity cm3/1000 strokes : 40.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 5.0
Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Start interlock Rated speed rpm Rated speed rpm Rated speed rpm	: 1200 : 12.95 : + 0.05 : - 975 : 975 : 9.05 : + 0.20 : 975 : 590 : 11.60 : + 0.20 : 330 : 9.75 : + 0.05	Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00 Del. quantity cm3/1000 strokes : 180.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 30.0 Rated speed rpm : 340 Del. quantity cm3/1000 strokes : 40.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000 strokes : + 5.0 Spreed
Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Start interlock Rated speed rpm Rated speed rpm Rated speed rpm Check	: 1200 : 12.95 : + 0.05 : - : 975 : 9.05 : + 0.20 : 975 : 590 : 11.60 : + 0.20 : 330 : 9.75 : + 0.05 : > 100 : < 250	Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00 Del. quantity cm3/1000 strokes : 180.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 30.0 LOW IDLE Rated speed rpm : 340 Del. quantity cm3/1000 strokes : 40.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000 strokes : + 5.0 Spreed Tolerance
Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Start interlock Rated speed rpm Rated speed rpm Rated speed rpm	: 1200 : 12.95 : + 0.05 : - 975 : 975 : 9.05 : + 0.20 : 975 : 590 : 11.60 : + 0.20 : 330 : 9.75 : + 0.05	Rated speed rpm : 100 rack travel mm : 20.00 Tolerance mm : + 1.00 Del. quantity cm3/1000 strokes : 180.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 30.0 Rated speed rpm : 340 Del. quantity cm3/1000 strokes : 40.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000 strokes : + 5.0 Spreed

Check tolerance cm3/1000S.	:	12.0	
End of test spec	ifica	tion sheet	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 27.02.97

Test oil

: ISO 4113

Combination No. : 9 400 030 695

Injection pump

Pump designation : PES4A95D32D/3RS288D

EP type number

: 9 410 037 214

Governor

Governer design. : RSV475...1250A0C825R

Governer no. : 9 420 034 701

Cust. part No. : 3928665

Customer-spec. information

Customer : CDC

Motor

: 4BT3.9

Power KW

: 82.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

Tolerance *C

: ÷- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

208.5

Tolerance bar

: +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0

x length mm :

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0

Tolerance bar : +- 1.0

2.45

Prestroke mm : +-: +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Tolerance : +- 0.50

Check

tolerance °NW

: +- 0.75

Start of delivery blocking

*NW after s.o.d. : 8.00 Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm: 12.55

Tolerance mm

: +- 0.05

Del. quantity + cm3/1000 strokes : 106.0 +	Tolerance
tms/ loud strokes : loo.u +	cm3/1000 strokes : +- 1.0 Check tolerance
Tolerance	cm3/1000s. : +- 3.0
cm3/1000 strokes : + 1.0 +	Spreed
Check tolerance	Tolerance cm3/1000 strokes : 4.0
cm3/1000s. : +- 3.0 +	cm3/1000 strokes : 4.0 Check tolerance
1 3.0	cm3/1000s. : 6.5
Spreed	
Tolerance +	
cm3/1000 strokes : 4.0	CONTROL LEVER
	ONTINOE EEVEN
Check tolerance	control lever
cm3/1000s. : 6.5	position degree : 114.0
	tolerance degree : +- 4.0
I	RATED SPEED
Rated speed rpm : 475	rack travel mm : 11.50
+	Rated speed rpm : 1335
Rack travel in mm: 5.80	Tolerance 1/min : + 5
Tolerance mm : + 0.10 + Del. quantity +	rack travel mm : 6.80
cm3/1000 strokes : 20.5	Rated speed rpm : 1395
Tolerance	Tolerance 1/min : + 5
cm3/1000 strokes : +- 2.0 +	
Check tolerance	rack travel mm : 0.85
cm3/1000s. : + 4.5	Tolerance mm ; + 0.55
Spreed + Tolerance +	Rated speed rpm : 1450
cm3/1000 strokes : 6.0	rack travel mm : 6.80
Check tolerance	Rated speed rpm : 1395
cm3/1000s. : 8.0 +	
†	
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	LOW IDLE
+	
+	and the state of t
GUIDE SLEEVE POSITION	control lever position degree : 87.0
GOIDE SEEEAE FOSTITOIA	tolerance degree : +- 4.0
+	
control lever	Control Lever difference
position degree : -3	Grad : 27.0
Rated speed rpm : 800	tolerance degree : \leftarrow 4.0
Rack travel in mm: 0.50	Setting point w/out bumper spring
Tolerance mm : + 0.20 +	
+	Rated speed rpm : 475
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 5.30 Tolerance mm : + 0.10
FOLL LOAD DELIVERY AT FULL LUAD STOP	Total artice limit . F- U. IU
Rated speed rpm : 1250	Testing:
Aneroid pressure +	-
hPa : 1000	Rated speed rpm : 475
Del. quantity	rack travel mm : 5.80 Tolerance mm : + 0.10
cm3/1000 strokes : 106.0	Tolerance mm : + 0.10

Rated speed rpm : 100 CRT mm min. : > 19.00 TORQUE CONTROL Rated speed rpm 1250 rack travel mm 12.55 Tolerance mm : +- 0.05 Rated speed rpm 750 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm 500 Pressure hPa 1000 Pressure hPa 500 Rated speed rpm rack travel mm 11.50 : +- 0.10 Tolerance mm MEASUREMENT Rated speed rpm 500 Pressure hPa 600 12.30 rack travel mm Tolerance mm : **←** 0.20 460 Pressure hPa 11.75 rack travel mm : +- 0.20 Tolerance mm Start interlock FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa Rated speed rpm 500 Del. quantity cm3/1000 strokes : 80.5 Tolerance

Rated speed rpm 100 rack travel mm 20.50 Tolerance mm : +- 0.50 Del. quantity cm3/1000 strokes : 120.0 Tolerance cm3/1000 strokes : +- 10.0 Check tolerance cm3/1000s.: +- 15.0 LOW IDLE Rated speed rpm : 475 Del. quantity cm3/1000 strokes : 20.5 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s.4.5 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 8.0

End of test specification sheet

STARTING FUEL DELIVERY

cm3/1000 strokes : +-

Check tolerance cm3/1000s.

1.0

3.0

Note remarks

Refer to Service Info for test and adjusment instructions.
See microcard(s) W400/...

Edition : 24.01.97 Test oil : ISO 4113

Combination No. : 9 400 030 721

Injection pump

Pump designation : PES6A95D320/3RS2895

EP type number : 9 410 037 238

Governor

Governer design. : RSV475...1250A0C839R

Governer no.

Cust. part No. : 3929601

Customer-spec. information Customer : CDC Motor : 63TA Power KW : 130.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

tolerance mm

Test pressure bar : 17.0 Tolerance bar : +- 1.0

Prestroke mm : 2.70
Tolerance mm : + 0.05
Check

Rack travel in mm : 10.50
Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

: + 0.10

Phasing : 0-60-120-180-240

Start of delivery blocking

*NW after s.o.d. : 9.00 Tolerance : +- 0.10

Check

tolerance *NW : +- 0.29

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 12.70 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 107.5

Tolerance +	Tolerance
cm3/1000 strokes : + 1.0	cm3/1000 strokes : +- 1.0
1,000 00,0000 1	Check tolerance
Charle to large T	
Check tolerance	cm3/1000s. : +- 3.0
$cm3/1000s$. : \leftarrow 3.0	Spreed
	Tolerance
Spreed	cm3/1000 strokes : 3.5
1	Check tolerance
Tolerance	
	cm3/1000s. : 6.0
cm3/1000 strokes : 3.5	
<u> </u>	
Check tolerance	
cm3/1000s, : 6.0	CONTROL LEVER
1	
	control lever
Ţ	
T	position degree : 108.0
Rated speed rpm : 550	tolerance degree : +- 4.0
+	
Rack travel in mm: 5.50	RATED SPEED
Tolerance mm : + 0.10	rack travel mm : 11.80
Del. quantity	Rated speed rpm : 1340
cm3/1000 strokes : 17.5	Tolerance 1/min : +- 5
	Toterance Thintin . The J
Tolerance	
cm3/1000 strokes : + 2.0 +	rack travel mm : _5.80
Check tolerance	Rated speed rpm : 1385
cm3/1000s. : +- 4.5	Tolerance 1/min : +- 5
Spreed	
Tolerance	rack travel mm : 0.85
cm3/1000 strokes : 3.5	Tolerance mm : +- 0.55
Check tolerance	Rated speed rpm : 1450
cm3/1000s. : 5.5	
+	rack travel mm : 5.80
•	
_	Rated speed rpm : 1385
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 1385
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 1385
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 1385
The state of the s	Rated speed rpm : 1385
The state of the s	
WITH GOVERNOR	Rated speed rpm : 1385
The state of the s	
WITH GOVERNOR	
WITH GOVERNOR	
GUIDE SLEEVE POSITION	LOW IDLE
GUIDE SLEEVE POSITION control lever	LOW IDLE control lever position degree : 78.0
GUIDE SLEEVE POSITION control lever position degree : FREE	LOW IDLE
GUIDE SLEEVE POSITION control lever	LOW IDLE control lever position degree : 78.0 tolerance degree : + 4.0
GUIDE SLEEVE POSITION control lever position degree : FREE Rated speed rpm : 800	LOW IDLE control lever position degree : 78.0 tolerance degree : + 4.0 Control lever difference
GUIDE SLEEVE POSITION control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50	LOW IDLE control lever position degree : 78.0 tolerance degree : +- 4.0 Control lever difference Grad : 30.0
GUIDE SLEEVE POSITION control lever position degree : FREE Rated speed rpm : 800	LOW IDLE control lever position degree : 78.0 tolerance degree : + 4.0 Control lever difference
GUIDE SLEEVE POSITION control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50	LOW IDLE control lever position degree : 78.0 tolerance degree : +- 4.0 Control lever difference Grad : 30.0
GUIDE SLEEVE POSITION control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20	control lever position degree : 78.0 tolerance degree : + 4.0 Control lever difference Grad : 30.0 tolerance degree : + 4.0
GUIDE SLEEVE POSITION control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	LOW IDLE control lever position degree : 78.0 tolerance degree : +- 4.0 Control lever difference Grad : 30.0
GUIDE SLEEVE POSITION control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	control lever position degree : 78.0 tolerance degree : + 4.0 Control lever difference Grad : 30.0 tolerance degree : + 4.0 Setting point w/out bumper spring
GUIDE SLEEVE POSITION control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	control lever position degree : 78.0 tolerance degree : + 4.0 Control lever difference Grad : 30.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 550
GUIDE SLEEVE POSITION control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	control lever position degree : 78.0 tolerance degree : + 4.0 Control lever difference Grad : 30.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 5.00
GUIDE SLEEVE POSITION control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50	control lever position degree : 78.0 tolerance degree : + 4.0 Control lever difference Grad : 30.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 550
GUIDE SLEEVE POSITION control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	control lever position degree : 78.0 tolerance degree : + 4.0 Control lever difference Grad : 30.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 5.00
GUIDE SLEEVE POSITION control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50	control lever position degree : 78.0 tolerance degree : + 4.0 Control lever difference Grad : 30.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 5.00 Tolerance mm : + 0.10
GUIDE SLEEVE POSITION control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50 FULL LOAD DELIVERY AT FULL LOAD STOP	control lever position degree : 78.0 tolerance degree : + 4.0 Control lever difference Grad : 30.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 5.00
GUIDE SLEEVE POSITION control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250	control lever position degree : 78.0 tolerance degree : + 4.0 Control lever difference Grad : 30.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 5.00 Tolerance mm : + 0.10 Testing:
GUIDE SLEEVE POSITION control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure	control lever position degree : 78.0 tolerance degree : + 4.0 Control lever difference Grad : 30.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 5.00 Tolerance mm : + 0.10 Testing: Rated speed rpm : 550
GUIDE SLEEVE POSITION control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : 900	control lever position degree : 78.0 tolerance degree : + 4.0 Control lever difference Grad : 30.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 5.00 Tolerance mm : + 0.10 Testing: Rated speed rpm : 550 rack travel mm : 550 rack travel mm : 550
GUIDE SLEEVE POSITION control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : 900 Del. quantity	control lever position degree : 78.0 tolerance degree : + 4.0 Control lever difference Grad : 30.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 5.00 Tolerance mm : + 0.10 Testing: Rated speed rpm : 550
GUIDE SLEEVE POSITION control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : 900	control lever position degree : 78.0 tolerance degree : + 4.0 Control lever difference Grad : 30.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 5.00 Tolerance mm : + 0.10 Testing: Rated speed rpm : 550 rack travel mm : 550 rack travel mm : 550

Rated speed rpm : 100 CRT mm min. :> 19.00TORQUE CONTROL Rated speed rpm : 1250 12.70 rack travel mm : Tolerance mm : +- 0.05 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm 500 Pressure hPa 900 Pressure hPa Rated speed rpm 500 rack travel mm 10.70 Tolerance mm : + 0.10MEASUREMENT 500 Rated speed rpm : Pressure hPa 480 rack travel mm 12.20 Tolerance mm : + 0.20Pressure hPa 350 11.40 rack travel mm Tolerance mm : +- 0.20 Start interlock FUEL DELIVERY CHARACTERISTICS Anaroid pressure hPa Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 72.5 Tolerance cm3/1000 strokes : +- 1.0Check tolerance cm3/1000s. 3.0

Tolerance mm : + 0.50Del. quantity cm3/1000 strokes : 121.5 Tolerance cm3/1000 strokes : + 10.0Check tolerance cm3/1000s. : +- 15.0 LOW IDLE Rated speed rpm : 550 Del. quantity cm3/1000 strokes : 17.5 Tolerance cm3/100C strokes : +-2.0 Check tolerance cm3/1000s. 4.5 Spreed Tolerance cm3/1000 strokes : 3.5

5.5

End of test specification sheet

Check tolerance

cm3/1000s. :

STARTING FUEL DELIVERY

Rated speed rpm : rack travel mm :

100

20.50

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 01.04.97 : ISO 4113

Combination No. : 9 400 030 737

Injection pump

Pump designation : PES6A95D320/3RS2881

EP type number : 9 410 037 215

Governor

Governer design. : RSV475...1100A0C850R

Governer no. : 9 420 034 716

Cust. part No. : 3929409

Customer-spec. information Customer : CDC

Notor : 6BT Power KW : 90.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance °C : -- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0

Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0 600 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.85 Tolerance mm : \leftarrow 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

Tolerance : +- 0.50

Check

tolerance "NW : **←** 0.75

Start of delivery blocking

*NW after s.o.d. : 7.00

Tolerance : +- 0.50

Check

tolerance °NW : **←** 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 10.85

Tolerance mm : \leftarrow 0.05

		+ Aneroid pressure	
Del. quantity		+ hPa	: 900
cm3/1000 strokes	: 86.0	+ Del. quantity	97.0
Tolerance		+ cm3/1000 strokes + Tolerance	: 86.0
cm3/1000 strokes	: +- 1.0	cm3/1000 strokes	: + 1.0
		+ Check tolerance	
Check tolerance		+ cm3/1000s.	: ← 3.0
cm3/1000S.	: 3.0	+ Spreed	
0		† Tolerance	~
Spreed		+ cm3/1000 strokes + Check tolerance	: 3.5
Tolerance		744000	: 6.0
cm3/1000 strokes	: 3.5	1 (113) (0003)	. 0.0
	. 513	+	
Check tolerance		+	
cm3/1000s.	: 6.0	+ CONTROL LEVER	
	-	- 	
		+ control lever + position degree	: 94.0
Rated speed rpm	: 500	tolerance degree	
nacea speca i piii	. 500	totel ance degree	. ' 4.0
Rack travel in mm	: 5.40	+ RATED SPEED	
Tolerance mm	: ← 0.10	+ rack travel mm	: 9.80
Del. quantity		+ Rated speed rpm	: 1165
cm3/1000 strokes	: 18.5	+ Tolerance 1/min	: +- 5
Tolerance		†	F
cm3/1000 strokes Check tolerance	: +- 2.0	+ rack travel mm + Rated speed rpm	: 5.50 : 1220
cm3/1000s.	: +- 4.5		: +220 : + 5
Spreed	• • •• •	T rocer ance minim	
Tolerance		+ rack travel mm	: 0.85
cm3/1000 strokes	: 3.5	+ Tolerance mm	: +- 0.55
Check tolerance		+ Rated speed rpm	: 1300
cm3/1600S.	: 5.5	+	F
		+ rack travel mm	: 5.50
(B) SETTING OF IN	JECTION PLIMP	Rated speed rpm	: 1230
WITH GOVERNOR	SECTION FOR	I	
W2177 G072-111011		+	
		+	
		+ LOW IDLE	
GUIDE SLEEVE POSI	TION	+	
		t control lever	
control lever		position degree	: 80.0
position degree	: - 3	tolerance degree	· · · · ·
Rated speed rpm		+	
		+ Control lever diffe	erence
Rack travel in mm		Grad	: 14.0
Tolerance mm	: 0.20	tolerance degree	: +- 6.0
		† catalan and a	b b.,
governor spring pre-tension		Setting point w/our	c bumper spring
click setting x	: 5.00	Rated speed rpm	: 500
DETER SCHEILING A	. 3.00	rack travel mm	4.90
		+ Tolerance mm	+ 0.10
FULL LOAD DELIVERY	Y AT FULL LOAD STOP	+	

Testing:

Rated speed rpm : 1100

Rated speed rpm	: 500
rack travel mm Tolerance mm	: 5.40 : +- 0.10
Rated speed rpm	
RT mm min.	: > 19.00
ORQUE CONTROL	
Rated speed rpm	: 1100
ack travel mm	: 10.85
Tolerance mm	: +- 0.05
Rated speed rpm	: 800
rack travel mm Tolerance mm	: 11.40 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 1100
rack travet mm Tolerance mm	: +- 0.30
Start interlock	
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	
hPa	: 900
Rated speed rpm Nel. quantity	: 800
cm3/1000 strokes	: 96.0
Tolerance	-
cm3/1000 strokes Check tolerance	: ← 2.0
cm3/1000s.	: +- 4.0
STARTING FUEL DEL	IVERY
Rated speed rpm rack travel mm	: 100 : 20.50
Tolerance mm	: ← 0.50
Del. quantity	. 422 "
cm3/1000 strokes Tolerance	: 120.5
cm3/1000 strokes	: +- 10.0
Check tolerance	45.0
cm3/1000s.	: + 15.0
LOW IDLE	

Rated speed rpm : 500

F28

Del. quantity cm3/1000 strokes : 18.5 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 5.5

End of test specification sheet

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 28,11,96 Test oil : ISO 4113

Combination No. : 0 401 848 708

Injection pump

Pump designation : PE8P110A320LS3802 EP type number : 0 411 818 710

Governor

Governer design. : RQ300/1150PA187-3 Governer no. : 0 421 801 133

Cust. part No. :

Customer-spec. information

Customer : MB-NFZ Motor : OM422 Power KW : 206.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 • -2.0 Tolerance °C

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Overflow quantity

min. l/h : 110 Tolerance l/h : +- 10.0

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 : **←** 1.5 Tolerance bar

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : 4.05 : +- 0.05 Tolerance mm

Check

: + 0.10 tolerance mm

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 8-7-2-6-3

: - 4- 1

Phasing : 0-45-90-135-180

: -270-315

Tolerance : + 0.30

Check

tolerance $^{\circ}NW$: \leftarrow 0.50

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance *NW : +- 0.75

Barrel no. : 8

BASIC SETTING

750 Rated speed rpm :

Rack travel in mm: 11.75

Tolerance mm : \leftarrow 0.05

	+ guide sleeve
Del. quantity cm3/1000 strokes : 114.0	travel mm : 7.50 Tolerance mm : + 0.20
Tolerance cm3/1000 strokes : +- 1.0	GUIDE SLEEVE POSITION
Check tolerance cm3/1000s. : +- 3.5	control lever position degree : - 1
Spreed	Rated speed rpm : 650
Tolerance cm3/1000 strokes : 4.0	Rack travel in mm : 13.50 Tolerance mm : + 0.50
Check tolerance cm3/1000s. : 7.0	FULL LOAD DELIVERY AT FULL LOAD STOP
to the second se	Rated speed rpm : 750
Rated speed rpm : 300	+ Aneroid pressure + hPa : -
Rated speed Ipili . 500	Del. quantity
Rack travel in mm : 8.10	+ cm3/1000 strokes : 114.0
Tolerance nam : + 0.10 Del. quantity	+ Tolerance + cm3/1000 strokes : +- 1.0
cm3/1000 strokes : 18.0	+ Check tolerance
Tolerance	+ cm3/1000s. : + 3.5
cm3/1000 strokes : +- 3.0 Check tolerance	+ Spreed + Tolerance
$cm3/1000s$. : \leftarrow 5.5	+ cm3/1000 strokes : 4.0
Spreed Tolerance	+ Check tolerance + cm3/1000s. : 7.0
cm3/1000 strokes : 4.0	+ cm3/1000s. : 7.0
Check tolerance	+
cm3/1000s. : 7.0	CONTROL LEVER
(B) SETTING OF INJECTION PUMP	t control lever
WITH GOVERNOR	position degree : 43.0
	tolerance degree : + 4.0
GUIDE SLEEVE TRAVEL	RATED SPEED
	rack travel mm : 10.70
Rated speed rpm : 1250 guide sleeve	+ Rated speed rpm : 1203 + Tolerance 1/min : +- 8
travel mm : 9.80	+ 10te: ditte 1/milli . +- 0
Tolerance mm : + 0.50	rack travel mm : 4.00
Rated speed rpm : 300	+ Rated speed rpm : 1255 + Tolerance 1/min : + 15
guide sleeve travel mm : 2.20	rack travel mm : 0.75
Tolerance mma : + 0.10	Tolerance mm : + 0.75 Rated speed rpm : 1350
Rated speed rpm : 650 guide sleeve	<u>†</u>
travel mm : 7.00	Ţ
Tolerance mm : + 0.10	100 50 5
Rated speed rpm : 1200	+ LOW IDLE

control lever position degree : 18.0 tolerance degree : + 4.0 Testing: 300 Rated speed rpm : rack travel mm 8.10 Tolerance mm : ← 0.10 2.00 rack travel mm Rated speed rpm Tolerance 1/min : +--20 Rated speed rpm 100 : CRT mm min. : > 10.20 Rated speed rpm : 550 CRT mm max. : < 1.80 TORQUE CONTROL Rated speed rpm : 750 11.75 rack travel mm Tolerance mm : ← 0.05 Rated speed rpm : 1150 rack travel mm : 11.75 Tolerance mm : ← 0.05 Start interlock FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa 1150 Rated speed rpm :

Del. quantity

cm3/1000 strokes : 134.0

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : +- 5.0

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. : 8.0

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 140.0

Tolerance

cm3/1000 strokes : + 10.0

Check tolerance

cm3/1000s. : +- 14.0

LOW IDLE

Rated speed rpm : 300

Del. quantity

cm3/1000 strokes : 18.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. : +- 5.5

Spreed

Tolerance

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s. : 7.0

End of test specification sheet

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition : 13.03.97 Test oil : ISO 4113

Combination No. : 0 402 046 875

Injection pump

Pump designation : PES6P110A320RS3329Z

EP type number : 0 412 016 744

Governor

Governer design. : RQV325...1250PA1251

Governer no. : 0 421 814 164

Cust. part No. : 1309376/0

Customer-spec. information

: DAF Customer Motor : NS 156M Power KW : 156.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

40 temp. °C Tolerance °C : - 2.0

Overflow valve : 1 417 413 000

Inlet press. bar : Tolerance bar : + 0.1

Overflow quantity

min. L/h : 160 Tolerance l/h : + 20.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar Tolerance bar : **←** 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm 5.25

Tolerance mm : +- 0.05

Check

= + 0.10tolerance mm

Rack travel in mm: 20.50 : +- 0.50 Tolerance mm

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

Tolerance : +- 0.30

Check

tolerance *NW : **←** 0.50

Start of delivery mark

Tolerance : → 0.10

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm: 11.85

Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 144.0	Tolerance mm : + 0.25 Rated speed rpm : 1510
Tolerance cm3/1000 strokes : + 1.0	guide sleeve + travel mm : 13.50 + Tolerance mm : + 0.50
Check tolerance cm3/1000s. : + 4.0	GUIDE SLEEVE POSITION
Spreed	+
Tolerance cm3/1000 strokes : 4.0	control lever position degree : - 1 Rated speed rpm : 1370
Check tolerance cm3/1000s. : 7.5	Rack travel in mm: 10.85 Tolerance mm: + 1.30
Rated speed rpm : 325	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 4.50 Tolerance mm : + 0.10 Del. quantity	Rated speed rpm : 1000 Aneroid pressure hPa : 1500
cm3/1000 strokes : 26.0 Tolerance cm3/1000 strokes : + 2.5	Del. quantity + cm3/1000 strokes : 144.0
Check tolerance cm3/100Gs. : +- 5.0	+ Tolerance + cm3/1000 strokes : +- 1.0 + Check tolerance
Spreed Tolerance cm3/1000 strokes : 12.0	cm3/1000s. : + 4.0 + Spreed + Tolerance
Check tolerance cm3/1090s. : 15.0	cm3/1000 strokes : 4.0 Check tolerance
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	cm3/1000s. : 7.5
GUIDE SLEEVE TRAVEL	control lever
Rated speed rpm : 1298 guide sleeve	position degree : 123.0 tolerance degree : +- 4.0
travel min : 10.25 Tolerance mm : +- 0.15	RATED SPEED + rack travel mm : 10.85 + Rated speed rpm : 1300
Rated speed rpm : 325 guide sleeve	+ Tolerance 1/min : + 5 + Check
travel mm : 1.25 Tolerance mm : +- 0.20	speed 1/min : +- 10
Rated speed rpm : 863 guide sleeve travel mm : 5.41	rack travel mm : 4.00 Rated speed rpm : 1375 Tolerance 1/min : + 15 Check
Tolerance mm : + 0.25	speed 1/min : + 20
Rated speed rpm : 520 guide sleeve travel mm : 3.02	rack travel mm : 0.50 Tolerance mm : + 0.50
travel mm : 3.02	+ Rated speed rpm : 1500

LOW IDLE

control lever

position degree : 76.0 tolerance degree : +- 4.0

Testing:

Rated speed rpm : 325
rack travel mm : 4.50
Tolerance mm : +- 0.10

Rated speed rpm : 225

CRT mm min. :> 6.00

Rated speed rpm : 375

TORQUE CONTROL

Rated speed rpm : 1000 rack travel mm : 11.85 Tolerance mm : ← 0.05

Rated speed rpm : 700 rack travel mm : 11.85 Tolerance mm : + 0.10

Rated speed rpm : 1250 rack travel mm : 11.85 Tolerance mm : +- 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 600
Pressure hPa : 1500
rack travel mm : 11.85
Tolerance mm : + 0.05

Pressure hPa : Rated speed rpm : 600
rack travel mm : 7.35
Tolerance mm : +- 0.20

MEASUREMENT

Rated speed rpm : 600

Pressure hPa : 370

rack travel mm : 10.75
Tolerance mm : +- 0.05

Pressure hPa : 200 rack travel mm : 8.40 Tolerance mm : + 0.10

Start interlock

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 1500 Rated speed rpm : 700 Del. quantity

cm3/1000 strokes : 145.0

Tolerance

cm3/1000 strokes : +- 3.0 Check tolerance

cm3/1000s. : +- 6.0

Aneroid pressure

hPa : Rated speed rpm : 1000

Del. quantity

cm3/1000 strokes : 94.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 3.5

LOW IDLE

Rated speed rpm : 325

Del. quantity

cm3/1000 strokes : 26.0

Tolerance

cm3/1000 strokes : \leftarrow 2.5

Check tolerance

cm3/1000s. : +- 5.0

Spreed

Tolerance

cm3/1000 strokes : 12.0

Check tolerance

cm3/1000s. : 15.0

End of test specification sheet

G06

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 14.03.97 Test oil : ISO 4113

Combination No. : 0 402 646 670

Injection pump

Pump designation : PE6P120A320RS7438 EP type number : 0 412 626 965

Governor

Governer design. : RQV275...1150PA1296K

Governer no. : 0 421 815 523

Cust. part No. : 1316183

Customer-spec. information

Customer : DAF

Motor : PF 235 M Power KW : 230.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 000

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 150 Tolerance l/h : +- 20.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.85 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Tolerance : + 0.30

Check

tolerance *NW : +- 0.50

Start of delivery mark

Tolerance : +- C.10

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 850

Rack travel in mm : 13.50

Tolerance mm : \leftarrow 0.05

Del. quantity - cm3/1000 strokes : 259.0 -	- Tolerance mm : +- 0.25 - Rated speed rpm : 1480
Tolerance	- guide sleeve - travel mm : 13.50 - Tolerance mm : +- 0.50
Check tolerance cm3/1000s. : + 4.0	- GUIDE SLEEVE POSITION
Spreed	-
Tolerance cm3/1000 strokes : 5.0	control lever position degree : - 1 Rated speed rpm : 1321
Check tolerance	Rack travel in mm : 12.25 Tolerance mm : +- 1.30
Rated speed rpm : 275	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 5.00 - Tolerance mm: + 0.10 - Del. quantity	- Rated speed rpm : 850 - Aneroid pressure - hPa : 1500
<pre>cm3/1000 strokes : 16.0 Tolerance cm3/1000 strokes : +- 3.0</pre>	Del. quantity cm3/1000 strokes : 259.0 Tolerance
Check tolerance - cm3/1000s. : +- 6.0	cm3/1000 strokes : +- 1.0 - Check tolerance
Spreed Tolerance cm3/1000 strokes : 8.0	- cm3/1000s. : +- 4.0 - Spreed - Tolerance
Check tolerance cm3/1000s. : 12.0	cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	CONTROL LEVER
CHINE CLEENE TRAVEL	
GUIDE SLEEVE TRAVEL	- control lever - position degree : 119.0
Rated speed rpm : 1201 - guide sleeve	tolerance degree : +- 4.0
travel mm : 10.07 - Tolerance mm : +- 0.15 -	- RATED SPEED - rack travel mm : 12.30 - Rated speed rpm : 1215
Rated speed rpm : 275 - guide sleeve - travel mm : 1.71 -	- Tolerance 1/min : +- 5 - Check - speed 1/min : +- 10
Tolerance mm : + 0.20	- rack travel mm : 4.00
Rated speed rpm : 811 guide sleeve travel mm : 6.79	- Rated speed rpm : 1340 - Tolerance 1/min : +- 15
Tolerance mm : + 0.25	- Check - speed 1/min : +- 20 -
Rated speed rpm : 450 guide sleeve	rack travel mm : 0.70 Tolerance mm : +- 0.70
travel mm : 3.85	- Rated speed rpm : 1450

LOW IDLE control lever 70.0 position degree : tolerance degree : + 4.0 Testing: 275 Rated speed rpm 5.00 rack travel mm Tolerance mm : **+** 0.10 175 Rated speed rpm CRT mm min. : > 7.60 Rated speed rpm : 395 TORQUE CONTROL Rated speed rpm : 850 rack travel mm 13.50 : **←** 0.05 Tolerance mm : 1130 Rated speed rpm : 13.30 rack travel mm Tolerance mm : +- 0.10 Rated speed rpm 1000 : 13.35 rack travel mm : + 0.10 Tolerance mm 003 Rated speed rpm 13.45 rack travel mm : + 0.10 Tolerance mm Rated speed rpm 650 12.85 rack travel mm Tolerance mm : +- 0.10 Rated speed rpm 500 12.10 rack travel mm Tolerance mm : **←** 0.10 : 1150 : 13.30 Rated speed rpm rack travel mm : +- 0.10 Tolerance mm

Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 875 : 1500 : 13.50 : + 0.10
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 875 : 9.15 : + 0.10
MEASUREMENT	
Rated speed rpm	: 875
Pressure hPa rack travel mm Tolerance mm	: 390 : 12.20 : ← 0.05
Pressure hPa rack travel mm Tolerance mm	: 130 : 10.10 : + 0.10
Start interlock	
FUEL DELIVERY CHA	RACTERISTICS
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm	: 1500 : 1130
Aneroid pressure hPa	: 1500 : 1130
Aneroid pressure hPa Rated speed rpm Del. quantity	: 1500 : 1130 : 238.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 1500 : 1130 : 238.0 : + 2.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: 1500 : 1130 : 238.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: 1500 : 1130 : 238.0 : + 2.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000S. Spread Tolerance	: 1500 : 1130 : 238.0 : + 2.0 : + 5.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spread Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure	: 1500 : 1130 : 238.0 : + 2.0 : + 5.0 : 8.0 : 12.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm	: 1500 : 1130 : 238.0 : + 2.0 : + 5.0 : 8.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 1500 : 1130 : 238.0 : + 2.0 : + 5.0 : 8.0 : 12.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity	: 1500 : 1130 : 238.0 : + 2.0 : + 5.0 : 8.0 : 12.0 : - 600

Spreed Tolerance

cm3/1000 strokes :

Check tolerance cm3/1000s.

8.0

12.0

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

LOW IDLE

Rated speed rpm 275 Del. quantity cm3/1000 strokes : 16.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance 12.0 cm3/1000s.

End of test specification sheet

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 14.03.97 Test oil : ISO 4113

Combination No. : 0 402 646 671

Injection pump

Pump designation : PE6P12OA32ORS7421 EP type number : 0 412 626 956

Governor

Governer design. : RQV275...1150PA1297K

Governer no. : 0 421 815 524

Cust. part No. : 1316184/1

Customer—spec. information
Customer : DAF
Motor : PF 205 M
Power KW : 205.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 417 413 000

Inlet press. bar : 1.5 Tolerance bar : +- 0.1

Overflow quantity

min. l/h : 160 Tolerance l/h : +- 20.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5 Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.85 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Tolerance : \leftarrow 0.30

Check

tolerance *NW : +- 0.50

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 850

Rack travel in mm : 12.35 Tolerance mm : + 0.05

G11

Del. quantity cm3/1000 strokes : 231.0	† Tolerance mm : +- 0.25
Tolerance	_ + Rated speed rpm : 1480 + guide sleeve
cm3/1000 strokes : + 1.0	travel mm : 13.50 Tolerance mm : + 0.50
Check tolerance cm3/1000s. : +- 4.0	GUIDE SLEEVE POSITION
Spreed	- T GOIDE SLEEVE POSITION
Tolerance cm3/1000 strokes : 5.0	control lever position degree : - 1 Rated speed rpm : 1329
Check tolerance cm3/1000S. : 9.0	Rack travel in mm : 11.10 Tolerance mm : + 2.70
Rated speed rpm : 275	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 4.90 Tolerance mm : + 0.10	Rated speed rpm : 850 Aneroid pressure
Del. quantity cm3/1000 strokes : 16.0	hPa : 1500 Del. quantity
Tolerance cm3/1000 strokes : +- 3.0	+ cm3/1000 strokes : 231.0 + Tolerance
Check tolerance cm3/1000S. : + 6.0	+ cm3/1000 strokes : + 1.0 + Check tolerance
Spreed Tolerance	+ cm3/1000s. : + 4.0 + Spreed
cm3/1000 strokes : 8.0 Check tolerance	Tolerance cm3/1000 strokes : 5.0
cm3/1000s. : 12.0	+ Check tolerance + cm3/1000s. : 9.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	CONTROL LEVER
GUIDE SLEEVE TRAVEL	control lever
Rated speed rpm : 1206	position degree : 118.0 tolerance degree : +- 4.0
guide sleeve travel mm : 10.12	+ RATED SPEED
Tolerance mm : + 0.15	rack travel mm : 11.10 Rated speed rpm : 1195
Rated speed rpm : 275 guide sleeve	+ Tolerance 1/min : + 5 + Check
travel mm : 1.71 Tolerance mm : + 0.20	+ speed 1/min : + 10
Rated speed rpm : 813 guide sleeve	+ rack travel mm : 4.00 + Rated speed rpm : 1300 + Tolerance 1/min : +- 15
travel mm : 6.81 Tolerance mm : + 0.25	+ Check + speed 1/min : + 20
Rated speed rpm : 450 guide sleeve	rack travel mm : 0.70 Tolerance mm : + 0.70
travel mm : 3.85	+ Rated speed rpm : 1400

LOW IDLE	
control lever position degree tolerance degree	: 71.0 : + 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 275 : 4.90 : ← 0.10
Rated speed rpm	: 175
CRT mm min.	: > 7.50
Rated speed rpm	: 350
TORQUE CONTROL	
Rated speed rpm rack travel man Tolerance mm	: 850 : 12.35 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1130 : 12.10 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 12.15 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 800 : 12.25 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 650 : 11.50 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 500 : 10.85 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 1150 : 12.10 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	

Rated speed rpm	: 875
Pressure hPa	: 1500
rack travel mm	: 12.35
Tolerance mm	: + 0.10
Pressure hPa	: -
Rated speed rpm	: 875
rack travel mm	: 8.00
Tolerance mm	: + 0.10
MEASUREMENT	
Rated speed rpm	: 875
Pressure hPa	: 420
rack travel mm	: 11.35
Tolerance mm	: + 0.05
Pressure hPa	: 150
rack travel mm	: 9.20
Tolerance mm	: + 0.10
Start interlock	

Start interlock

FHEI	DEL TI	/ERY	CHARACTERISTICS	
FUEL	NELTI	וחםו	CHARACTERIOTICS	

FUEL DELIVERY CHA	RACTERISTI	CS
Aneroid pressure		
hPa	: 1500	
Rated speed rpm	: 1130	
Del. quantity		
cm3/1000 strokes	: 207.	0
Tolerance	_	_
cm3/1000 strokes	: + 2.1	D
Check tolerance		_
cm3/1000s.	: +- 5.1	J
Spreed Tolerance		
cm3/1000 strokes	: 8.0	n
Check tolerance	. 0.,	_
cm3/1000s.	: 12.0	0
Aneroid pressure		
hPa	: - 600	
Rated speed rpm	: 600	
Del. quantity		_
cm3/1000 strokes	: 138.	J
Tolerance	: + 1.1	_
cm3/1000 strokes Check tolerance	: + 1.1	J
cm3/1000s.	: + 4.1	n
Spreed	7.1	,
Tolerance		
cm3/1000 strokes	: 8.0	0
Check tolerance		
cm3/1000s.	: 12.0	0

LOW IDLE

Rated speed rpm Del. quantity	: 275
cm3/1000 strokes Tolerance	: 16.0
cm3/1000 strokes Check tolerance	: ← 3.0
cm3/1000s.	: ← 6.0
Tolerance cm3/1000 strokes Check tolerance	: 8.0
cm3/1000s.	: 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 14,03.97 Edition : ISO 4113 Test oil

Combination No. : 0 402 646 672

Injection pump

Pump designation : PE6P12OA32ORS7421 EP type number : 0 412 626 956

Governor

Governer design. : RQV275...1150PA1298K

Governer no. : 0 421 815 525

Cust. part No. : 1316185/1

Customer-spec. information Customer : DAF Motor : PF 183 M Power KW : 183.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 000

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 150 Tolerance L/h : + 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

3.0 x inside diameter : x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : \leftarrow 1.0

Prestroke mm : 4.85 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

Tolerance : +- 0.30

Check

tolerance *NW : +- 0.50

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 850

Rack travel in mm: 11.05

Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 206.0	Tolerance mm : +- 0.25 Rated speed rpm : 1480
Tolerance cm3/1000 strokes : + 1.0	guide steeve travel mm : 13.50 Tolerance mm : +- 0.50
Check tolerance cm3/1000s. : +- 4.0	GUIDE SLEEVE POSITION
Spreed	
Tolerance cm3/1000 strokes : 5.0	control lever position degree : - 1 Rated speed rpm : 1343
Check tolerance cm3/1000s. : 9.0	Rack travel in mm : 9.80 Tolerance mm : + 2.70
Rated speed rpm : 275	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 4.90 Tolerance mm: + 0.10 Del. quantity	Rated speed rpm : 850 Aneroid pressure hPa : 1500
<pre>cm3/1000 strokes : 16.0 Tolerance cm3/1000 strokes : +- 3.0</pre>	Del. quantity cm3/1000 strokes : 206.0 Tolerance
Check tolerance cm3/1000S. : +- 6.0 +- Spreed	cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0
Tolerance cm3/1000 strokes : 8.0 check tolerance	Spreed Tolerance cm3/1000 strokes : 5.0
cm3/1000s. : 12.0	Check tolerance cm3/1000s. : 9.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	
	CONTROL LEVER
GUIDE SLEEVE TRAVEL	control lever position degree : 117.0
Rated speed rpm : 1200	tolerance degree : +- 4.0
travel mm : 10.06 Tolerance mm : + 0.15	RATED SPEED rack travel mm : 9.80 Rated speed rpm : 1190
Rated speed rpm : 275 guide sleeve travel mm : 1.71	Tolerance 1/min : +- 5 Check speed 1/min : +- 10
Tolerance mm : + 0.20	rack travel mm : 4.00
Rated speed rpm : 811 guide sleeve travel mm : 6.79	Rated speed rpm : 1285 Tolerance 1/min : + 15 Check
Tolerance mm : + 0.25	speed 1/min : +- 20
Rated speed rpm : 450 + guide sleeve +	rack travel mm : 0.70 Tolerance mm : +- 0.70
travel mm : 3.85	Rated speed rpm : 1450

LOW IDLE	
control lever position degree tolerance degree	: 72.0 : +- 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 275 : 4.90 : ← 0.10
Rated speed rpm	: 175
CRT mm min.	: > 7.50
Rated speed rpm	: 325
TORQUE CONTROL	
Rated speed rpm rack travel man Tolerance mm	: 850 : 11.05 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1130 : 10.80 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 10.90 : + 0.10
Ruted speed rpm rack travel mm Tolerance mm	: 800 : 10.90 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 650 : 10.10 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 500 : 9.35 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 1150 : 10.80 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	

Rated speed rpm	: 875
Pressure hPa	: 1500
rack travel mm	: 11.10
Tolerance mm Pressure hPa	: +- 0.10 · -
Rated speed rpm	: 875
rack travel mm	: 8.00
Tolerance mm	: +- 0.10
MEASUREMENT	
Rated speed rpm	: 875
Pressure hPa	: 350
rack travel mm	: 10.20
Tolerance mm	: + 0.05
Pressure hPa	: 130
rack travel mm	: 8.40
Tolerance mm	: + 0.10
Start interlock	

FUEL DELIVERY CHA	ARACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity	: 1500 : 1130
cm3/1000 strokes	: 184.0
Tolerance cm3/1000 strokes Check tolerance	: + 2.0
cm3/1000s. Spreed	: + 5.0
Tolerance cm3/1000 strokes Check tolerance	: 8.0
cm3/1000s.	: 12.0
Aneroid pressure hPa Rated speed rpm	: - : 600
Del. quantity cm3/1000 strokes Tolerance	: 138.0
cm3/1000 strokes Check tolerance	: +- 1.0
cm3/1000s. Spreed	: + 4.0
Tolerance cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	: 12.0

LOW IDLE

Rated speed rpm	: 275
Del. quantity cm3/1000 strokes Tolerance	: 16.0
cm3/1000 strokes Check tolerance	: +- 3.0
cm3/1000s. Spreed	: +- 6.0
Tolerance cm3/1000 strokes Check tolerance	: 8.0
cm3/1000s.	: 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 14.03.97 : ISO 4113 Test oil

Combination No. : 0 402 646 673

Injection pump

Pump designation : PE6P12OA32ORS7412 EP type rumber : 0 412 626 953

Governor

Governer design. : RQV275...1000PA1300K

Governer no. : 0 421 815 527

Cust. part No. : 1315099

Customer-spec. information Customer : DAF

: XF 250 M Motor Power KW : 250.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 000

Inlet press. bar : 1.5 Toterance bar : + 0.1

Overflow quantity

min. L/h : 150 Tolerance L/h : + 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5 Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : → 1.0

Prestroke mm 4,45 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1-5-3-6-2-

: 4

: 0-66-120-180-240 Phasing Phasing Tolerance

: ← 0.30

Check

tolerance $^{\circ}NW$: \leftarrow 0.50

Start of delivery mark

Tolerance : → 0.10

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

750 Rated speed rpm :

Rack travel in mm: 11.40

Tolerance mm : \leftarrow 0.05

Del. quantity	+ Tolerance mm : +- 0.25
cm3/1000 strokes : 289.0	+
Tolerance	+ Rated speed rpm : 1310 + guide sleeve
cm3/1000 strokes : + 1.0	+ travel mm : 13.50
Check tolerance	Tolerance mm : + 0.50
cm3/1000s. : +- 4.0	
Spreed	GUIDE SLEEVE POSITION
·	+
Tolerance cm3/1000 strokes : 5.0	+ control lever + position degree : - 1
	Rated speed rpm : 1181
Check tolerance cm3/1000s. : 9.0	+ Rack travel in mm: 10.00
	- Tolerance mm : +- 1.30
	İ
Rated speed rpm : 275	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 3.20 Tolerance mm : +- 0.10	Rated speed rom : 750
Tolerance mm : +- 0.10 Del. quantity	Aneroid pressure hPa : 1500
cm3/1000 strokes : 17.0	+ Del. quantity
Tolerance cm3/1000 strokes : +- 3.0	+ cm3/1000 strokes : 289.0 + Tolerance
Check tolerance	+ cm3/1000 strokes : +- 1.0
cm3/1000s. : +- 6.0 Spreed	+ Check tolerance + cm3/1000S. : + 4.0
Tolerance	Spreed
cm3/1000 strokes : 8.0 Check tolerance	+ Tolerance + cm3/1000 strokes : 5.0
cm3/1000s. : 12.0	+ Check tolerance
	+ cm3/1000s. : 9.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	
WITH GOVERNOR	CONTROL LEVER
GUIDE SLEEVE TRAVEL	control lever
	+ position degree : 118.0
Rated speed rpm : 1072 guide sleeve	tolerance degree : + 4.0
travel mm : 10.16	RATED SPEED
Tolerance mm : + 0.15	+ rack travel mm : 9.90 + Rated speed rpm : 1045
Rated speed rpm : 275	+ Tolerance 1/min : +- 5
guide sleeve travel mm : 2.04	+ Check + speed 1/min : + 10
Tolerance mm : + 0.20	+
Rated speed rpm : 701	+ rack travel mm : 4.00 + Rated speed rpm : 1135
guide sleeve	Tolerance 1/min : + 15
travel mm : 6.52 Tolerance mm : + 0.25	+ Check + speed 1/min : + 20
Tolerance mm : +- 0.25	+ speed 1/min : + 20
Rated speed rpm : 400	rack travel mm : 0.70
guide sleeve travel mm : 3.92	+ Tolerance mm : + 0.70 + Rated speed rpm : 1275
· · · · · · · · · · · · · · · · · · ·	

LOW IDLE

control lever

position degree : 70.0 tolerance degree : +-4.0

Testing:

Rated speed rpm : 275 rack travel mm 3.20 Tolerance mm : + 0.10

: 175 Rated speed rpm

CRT mm min. : > 6.50

Rated speed rpm : 310

TORQUE CONTROL

Rated speed rpm 750 rack travel mm 11.40 Tolerance mm : +- 0.05

980 Rated speed rpm rack travel mm 10.90 Tolerance mm : +- 0.10

900 Rated speed rpm 11.10 rack travel mm : + 0.10 Tolerance mm

700 Rated speed rpm 11.30 rack travel mm Tolerance mm : + 0.10

600 Rated speed rpm 10.80 rack travel mm Tolerance mm : + 0.10

Rated speed rpm : 500 rack travel mm 10.40 Tolerance mm : +- 0.10

1000 Rated speed rpm 10.90 rack travel mm : + 0.10Tolerance mm

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 775 Pressure hPa 1500 rack travel mm 11.35 Tolerance mm : - 0.05

Pressure hPa Rated speed rpm 775 rack travel mm 7.90 Tolerance mm : +- 0.20

MEASUREMENT

: 775 Rated speed rpm

Pressure hPa 460 rack travel mm 10.40 : +- 0.05 Tolerance mm

Pressure hPa 250 : 8.80 rack travel mm : + 0.10Tolerance mm

Start interlock

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

1500 980 Rated speed rpm Del. quantity

cm3/1000 strokes : 250.0

Tolerance

cm3/1000 strokes : +-2.0 Check tolerance

cm3/1000s. 5.0 : +-

Spreed Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s.12.0

Aneroid pressure

hPa Rated speed rpm 600 Del. quantity

cm3/1000 strokes : 188.0

Tolerance

cm3/1000 strokes : +-1.0

Check tolerance

cm3/1000s. : +-4.0

LOW IDLE

Rated speed rpm Del. quantity	:	275
cm3/1000 strokes Tolerance	:	17.0
cm3/1000 strokes Check tolerance	: +-	3.0
cm3/1000s.	: +-	6.0
Tolerance cm3/1000 strokes Check tolerance	:	8.0
cm3/1000s.	;	12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 18.03.97 Edition : 10.03.77 : ISO 4113 Test oil

Combination No. : 0 402 648 783

Injection pump

Pump designation : PE8P12OA32OLS79O6-1

E? type number : 0 412 628 925

Governor

Governer design. : RQ750PA1326 Governer no. : 0 421 801 815

Cust. part No. : 04222 3938 KY

Customer-spec. information Cusicomer : KHU

Motor : BF8M1015/C

Power KW : 318.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 033

Inlet press. bar : Tolerance bar : + 0.1

Overflow quantity

min. l/h : 200 Tolerance l/h : + 20.0 200

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 Tolerance bar : \leftarrow 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm 3.65 : +- 0.05 Tolerance mm

Check

tolerance mm : **←** 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 8-7-2-6-5

: - 3- 1

Phasing : 0-45-90-135-180

: -270-315

Tolerance : +- 0.30

Check

tolerance $^{\circ}NW$: + 0.50

Start of delivery blocking

*NW after s.o.d. : 315.00

Tolerance : +- 0.50

Check

: **←** 0.75 tolerance *NW

Barrel no. 8

BASIC SETTING

Rated speed rpm : 700

	1	• , ,	
Dool toward to me a 42 (0	, †	guide sleeve	. 42.00
Rack travel in mm: 12.60		travel mm	: 12.00
Tolerance mm : + 0.05	' †	Tolerance mm	: +- 0.25
No.1		5.4.1	070
Del. quantity	, †	Rated speed rpm	: 930
cm3/1000 strokes : 365.0	' †	guide sleeve	47.50
T-1	†	travel mm	: 13.50
Tolerance	, †	Tolerance mm	: +- 0.50
cm3/1000 strokes : + 1.0	' †		
Charl Arlana	 †		
Check tolerance	. †	FULL LOAD DELIVERY	Y AT FULL LOAD STOP
cm3/1000s. : + 4.0	' †		700
0		Rated speed rpm	: 700
Spreed	†	Aneroid pressure	
- 1	†	hPa	: -
Tolerance	,	Del. quantity	71.7
cm3/1000 strokes : 5.0	' †	cm3/1000 strokes	: 365.0
Charle de Lengue	†	Tolerance	
Check tolerance	, +	cm3/1000 strokes	: +- 1.0
cm3/1000s. : 9.0	†	Check tolerance	
	 †	cm3/1000s.	: +- 4.0
	†	Spreed	
Dated speed 700	†	Tolerance	. 50
Rated speed rpm : 300	†	cm3/1000 strokes	: 5.0
Del. quantity	. †	Check tolerance	
cm3/1000 strokes : 20.0	' †	cm3/1000s.	: 9.0
Tolerance	, †		
cm3/1000 strokes : + 3.0	' †		
Check tolerance : +- 6.0		CONTROL I FUED	
	' <u>†</u>	CONTROL LEVER	
Spreed	†	aamamad lawaa	
Tolerance cm3/1000 strokes : 3.0	, †	control lever	. 112.0
	' '	position degree	
Check tolerance cm3/1000s. : 12.0		tolerance degree	: + 4.0
cm3/1000s. : 12.0	'		
	Ť	ACCEMBLY COVERNOD	CETTING
(B) SETTING OF INJECTION PUM	, T	ASSEMBLY GOVERNOR	SELLTING
WITH GOVERNOR	T	Rated speed rpm	: 750
WITH GOVERNOR	I		
		rack travel mm	: 11.60
GUIDE SLEEVE TRAVEL	I	Rated speed rpm	: 780
GOIDE SEELE INAVEL	I	Tolerance 1/min	
Rated speed rpm : 715	I	rack travel mm	: 5.50
guide sleeve	I	I GOV CLOACT (MI)	. 5.50
travel mm : 4.23	\mathbf{I}	rack travel mm	: 0.50
Tolerance mm : +- 0.15		Tolerance mm	: +- 0.50
	\mathbf{I}	Rated speed rpm	: 900
Rated speed rpm : 610	I	Mateu specu i pili	. 700
guide sleeve	1		
travel mm : 0.72	1	Rated speed rpm	: 751
Tolerance mm : + 0.25		rack travel mm	: 11.60
	1	. were the second	
Rated speed rpm : 900	1	Rated speed rpm	: 781
guide sleeve	1	Tolerance 1/min	
travel mm : 14.89	1	rack travel mm	5.50
Tolerance mm : + 0.25			
	1	rack travel mm	: 0.50
Rated speed rpm : 862	1	Tolerance mm	: + 0.50
······································	1		
	•		

Rated speed rpm	: 752
rack travel mm	: 11.60
Rated speed rpm	: 782
Tolerance 1/min	: + 4
rack travel mm	: 5.50
rack travel mm Tolerance mm Rated speed rpm	: +- 0.50
Rated speed rpm	: 753
rack travel mm	: 11.60
Rated speed rpm	: 783
Tolerance 1/min	: + 4
rack travel mm	: 5.50
rack travel mm	: 0.50
Tolerance mm	: - 0.50
Rated speed rpm	: 754
rack travel mm	: 11.60
Rated speed rpm	: 784
Tolerance 1/min	: + 4
rack travel mm	: 5.50
rack travel mm Tolerance mm Rated speed rpm	: - 0.50
Rated speed rpm	: 755
rack travel mm	: 11.60
Rated speed rpm Tolerance 1/min rack travel mm	
rack travel mm	: 0.50
Tolerance mm	: + 0.50
TORQUE CONTROL	
Rated speed rpm	: 700
rack travel mm	: 12.60
Tolerance mm	: ← 0.05
Start interlock	
Rated speed rpm	: > 100
Rated speed rpm	: < 560

Check speed 1/min	:	>	80	
Check speed 1/min	:	<	580	
•				
STARTING FUEL DEL	IVE	RY		
Rated speed rpm	:		100	
rack travel mm Tolerance mm	:	+	20.25	
Del. quantity	·			
cm3/1000 strokes Tolerance	:		200.0	
cm3/1000 strokes	:	+-	15.0	
Check tolerance cm3/1000s.	:	+-	19.0	
LOW IDLE				
Rated speed rpm	:		300	
Del. quantity cm3/1060 strokes	:		20.0	
Tolerance cm3/1000 strokes		+-	3.0	
Check tolerance	•	-	3.0	
cm3/1000s. Spreed	:	+	6.0	
Tolerance			0.0	
cm3/1000 strokes Check tolerance	:		8.0	
cm3/1000s.	:		12.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 18.03.97 Test oil : ISO 4113

Combination No. : 0 402 678 837

Injection pump

Pump designation : PE8P120A320LS7911 EP type number : 0 412 628 926

Governor

Governer design. : RSV550...1050P0A679

Governer no. : 0 421 833 598

Cust. part No. : 027 074 6502

Customer-spec. information Customer : M8-NFZ

: OM442LA, Euro Motor

Power KW : 320.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C : +-2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 110 Tolerance L/h : ← 10.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

208.5 bar Tolerance bar : + 1.5 Test Lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.25 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 20.50 Tolerance mm : + 0.50

Firing order : 8-7-2-6-3

: - 4- 1

Phasing : 0-45-90-135-180

: -270-315

Tolerance : +- 0.30

Check

tolerance *NW : + 0.50

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance *NW : +- 0.75

Barrel no. : 8

BASIC SETTING

1080 Rated speed rpm :

: **←** 0.05 Tolerance mm

Del. quantity cm3/1000 strokes	: 225.0	Aneroid pressure hPa Del. quantity	: -
Tolerance cm3/1000 strokes	: + 1.0	cm3/1000 strokes Tolerance cm3/1000 strokes	
Check tolerance cm3/1000s.	: + 4.0	Check tolerance cm3/1000s.	: + 4.0
Spreed		+ Spreed + Tolerance + cm3/1000 strokes	: 5.0
Tolerance cm3/1000 strokes	: 5.0	Check tolerance cm3/1000s.	: 9.0
Check tolerance cm3/1000s.	: 9.0	ASSEMBLY GOVERNOR	SETTING
Rated speed rpm	: 550	Rated speed rpm Tolerance 1/min	: + 1111 : + 1
		Rated speed rpm	: 1144
	: 4.10 : + 0.10	Tolerance 1/min rack travel mm	: ← 4 : 4.00
Del. quantity cm3/1000 strokes	: 19.0	+ rack travel mm	: 0.85
Tolerance cm3/1000 strokes	: 	Tolerance mm Rated speed rpm	
Check tolerance	: +- 6.0	Harea opeca i più	. 1355
cm3/1000s. Spreed	. — 0.0	Rated speed rpm	: 1113
Tolerance cm3/1000 strokes	: 8.0	+ Tolerance 1/min	: + 1
Cneck tolerance cm3/1000s.	: 12.0	Rated speed rpm Tolerance 1/min	: 1146 : + 4
CHD/ 10003.	. /2.0	rack travel mm	4.00
(B) SETTING OF INJ	ECTION PUMP	rack travel mm	: 0.85
WITH GOVERNOR	•	Tolerance mm Rated speed rpm	: ← 0.55 : 1300
		1	
GUIDE SLEEVE POSIT	ION	Rated speed rpm Tolerance 1/min	: 1115 : + 1
control lever	. 7	Rated speed rpm	: 1148
position degree Rated speed rpm		Tolerance 1/min rack travel mm	
Rack travel in mm Tolerance mm		rack travel mm Tolerance mm	
governor spring	•	Rated speed rpm	: 1300
pre-tension click setting x	: 2.00	Rated speed rpm Tolerance 1/min	: 1117 : + 1
FULL LOAD DELIVERY	AT FULL LOAD STOP	Rated speed rpm	
Rated speed rpm	: 1080	Tolerance 1/min rack travel mm	

rack travel mm Tolerance mm	: 0.85 : + 0.55	+ Del. quantity + cm3/1000 strokes : 242.0
Rated speed rpm		+ Tolerance
		+ cm3/1000 strckes : +- 2.0 + Check tolerance
Rated speed rpm		+ cm3/1000s. : $+$ 5.0
Tolerance 1/min	: +- 1	+ Spræed + Tolerance
Rated speed rpm		+ cm3/1000 strokes : 8.0
Tolerance 1/min rack travel mm		+ Check tolerance + cm3/1000S. : 12.0
		+
rack travel mm Tolerance mm	: 0.85 : +- 0.55	+ Aneroid pressure + hPa : -
Rated speed rpm		Rated speed rpm : 500
		+ Del quantity
		+ cm3/1000 strokes : 150.0 + Tolerance
Rated speed rpm		cm3/1000 strokes : + 2.0
Tolerance 1/min rack travel mm	•	‡
rack travel mm Tolerance mm	: 0.85 : +- 0.55	STARTING FUEL DELIVERY
Rated speed rpm		Rated speed rpm : 100
, ,		rack travel mm : 15.00
		Tolerance mm : + 0.20
LOW IDLE		+ Del. quantity + cm3/1000 strokes : 225.0
Testing:		Tolerance
_		+ cm3/1000 strokes : + 10.0
Rated speed rpm		+ Check tolerance
rack travel mm Tolerance mm		$\frac{1}{1}$ cm3/1000s. : + 14.0
		+
SET IDLE AUXILIA	RY SPRING	
rack travel ma	: 2.00	+ LOW IDLE
TODOUG CONTROL		Rated speed rpm : 550
TORQUE CONTROL		+ Del. quantity + cm3/1000 strokes : 19.0
Rated speed rpm		- Tolerance
Tolerance mm	: ← 0.05	+ cm3/1000 strokes : +- 3.0 + Check tolerance
Rated speed rpm	: 600	- check toterance - cm3/1000s. : +- 6.0
Tolerance mm	: + 0.10	Spreed
Tolerance mm	: +- 0.10	+ Tolerance + cm3/1000 strokes : 8.0
1001 01700 1117		+ Check tolerance
Start interlock		+ cm3/1000s. : 12.0
		<u> </u>
FUEL DELIVERY CHA	ARACTERISTICS	
	-	End of test specification sheet
Aneroid pressure hPa		1
Rated speed rom	600	

Rated speed rpm

600

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 14.03.97 Test oil : ISO 4113

Combination No. : 0 402 746 632

Injection pump

Pump designation : PES6P120A720RS7366 EP type number : 0 412 726 933

Governor

Governer design. : RQ300/1050PA1340 Governer no. : 0 421 801 820

Cust. part No. :

Customer-spec. information

Customer : IVECO-FRANCE Motor : 8460.41s.7031

Power KU : 254.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 076

Inlet press. bar : 1.5
Tolerance bar : + 0.1

Overflow quantity

min. L/h : 160 Tolerance L/h : + 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 Tolerance bar : \leftarrow 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05

Check

tolerance man : ÷ U.10

Rack travel in mm: 20.50 Tolerance mm : \leftarrow 0.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 : +- 0.30 Phasing

Tolerance

Check

tolerance *NW : +- 0.50

Start of delivery mark

Check

tolerance *NW : +- 0.40

: 1 Barrel no.

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 12.95 Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 290.0	+ Tolerance mm : + 0.10
Tolerance	Rated speed rpm : 399 guide sleeve
cm3/1000 strokes : + 1.0 Check tolerance	travel mm : 4.74 Tolerance mm : +- 0.10
cm3/1000s. : +- 4.0	Rated speed rpm : 480 guide sleeve
Spreed	+ travel mm : 6.00 + Tolerance mm : + 0.10
Tolerance cm3/1000 strokes : 5.0	Rated speed rpm : 1270 guide sleeve
Check tolerance cm3/1000s. : 9.0	travel mm : 11.50 Tolerance mm : + 0.50
	+ Rated speed rpm : 877
Rated speed rpm : 300	guide sleeve travel mm : 6.38
Rack travel in mm: 5.50	+ Tolerance mm : + 0.10
Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : 23.0	GUIDE SLEEVE POSITION
Tolerance cm3/1000 strokes : +- 3.0	control lever
Check tolerance cm3/1000s. : +- 6.0	position degree : 109 Rated speed rpm : 1139
Spreed Tolerance cm3/1000 strokes : 8.0	+ Rack travel in mm : 11.90 + Tolerance mm : + 1.30
Check tolerance cm3/1000s. : 12.0	Toterance man : +- 1.50
	FULL LOAD DELIVERY AT FULL LOAD STOP
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 1050 Aneroid pressure hPa : 1200
CUIDE CLEEVE TRAVEL	Del. quantity cm3/1000 strokes : 290.0
GUIDE SLEEVE TRAVEL Rated speed rpm : 1110	+ Tolerance + cm3/1000 strokes : +- 1.0
guide sleeve travel mm : 6.85	Check tolerance + cm3/1000s. : +- 4.0
Tolerance mm : + 0.15	+ Spreed + Tolerance
Rated speed rpm : 300 guide sleeve	+ cm3/1000 strokes : 5.0 + Check tolerance
travel mm : 1.97 Tolerance mm : +- 0.20	+ cm3/1000s. : 9.0
Rated speed rpm : 1050 guide sleeve	+ RATED SPEED + rack travel mm : 11.90
travel mm : 6.50 Tolerance mm : +- 0.10	Rated speed rpm : 1103 Tolerance 1/min : + 8
Rated speed rpm : 697	Check + speed 1/min : + 13
guide sleeve travel mm : 6.13	rack travel mm : 4.00

Rated speed rpm	: 1180	+ Pressure hPa	: 1200
Tolerance 1/min	: +- 15	+ rack travel mm	: 14.10
Check		+ Tolerance mm	
speed 1/min	: +- 20	+	
		+ Pressure hPa	: -
rack travel mm		+ Rated speed rpm	: 500
Tolerance mm	: +- 0.50	🕂 rack travel mm	: 9.65
Rated speed rpm	: 1350	rack travel mm Tolerance mm	: +- 0.20
		+	
		+ MEASUREMENT	
		+	
	·	+ Rated speed rpm	: 500
LOW IDLE		+	
		+ Pressure hPa	: 250
		† rack travel mm	: 10.15
control lever	7/ 0	+ Tolerance mm	: +- 0.20
position degree		† , , ,	500
tolerance degree	: +- 4.0	+ Pressure hPa	: 500
Tanklana		+ rack travel mm	
Testing:		+ Tolerance mm	: + 0.05
Dated speed non	: 300	Chank dakanta da	
Rated speed rpm rack travel mm		+ Start interlock	
Tolerance mm	: +- 0.10	T Batad aroad num	. > 100
rocerance one	: 0.10	+ Rated speed rpm	
rack travel mm	: 2.00	+ Rated speed rpm	: < 250
Rated speed rpm		T Check	
Tolerance 1/min		speed 1/min	: > 80
TOCET BLICE TAINTIT	20	Check	. > 80
Rated speed rpm	: 200	+ speed 1/min	: < 240
race cpcca rpm	. 200	- opeca //ii//	
CRT mm min.	: > 8.15		
			RACTERISTICS
TORQUE CONTROL		+ Aneroid pressure	
		∔ hPa	4000
			: 1200
Rated speed rpm		+ Rated speed rpm	
rack travel mm	: 12.95	Rated speed rpm Del. quantity	: 500
		Rated speed rpm Del. quantity cm3/1000 strokes	: 500
rack travel mm Tolerance mm	: 12.95 : + 0.05	Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 500 : 331.0
rack travel mm Tolerance mm Rated speed rpm	: 12.95 : + 0.05 : 500	Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 500 : 331.0
rack travel mm Tolerance mm Rated speed rpm rack travel mm	: 12.95 : + 0.05 : 500 : 14.10	Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 500 : 331.0 : + 4.0
rack travel mm Tolerance mm Rated speed rpm	: 12.95 : + 0.05 : 500 : 14.10	Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 500 : 331.0 : + 4.0
rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 12.95 : + 0.05 : 500 : 14.10 : + 0.10	Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 500 : 331.0 : + 4.0
rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm	: 12.95 : + 0.05 : 500 : 14.10 : + 0.10 : 700	Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure	: 500 : 331.0 : + 4.0
rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm	: 12.95 : + 0.05 : 500 : 14.10 : + 0.10 : 700 : 13.90	Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa	: 500 : 331.0 : ← 4.0 : ← 7.0 : -
rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm	: 12.95 : + 0.05 : 500 : 14.10 : + 0.10 : 700	Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm	: 500 : 331.0 : ← 4.0 : ← 7.0 : -
rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 12.95 : + 0.05 : 500 : 14.10 : + 0.10 : 700 : 13.90 : + 0.10	Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity	: 500 : 331.0 : ← 4.0 : ← 7.0 : - : 500
rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 12.95 : + 0.05 : 500 : 14.10 : + 0.10 : 700 : 13.90 : + 0.10 : 875	Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 500 : 331.0 : ← 4.0 : ← 7.0 : - : 500
rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 12.95 : + 0.05 : 500 : 14.10 : + 0.10 : 700 : 13.90 : + 0.10 : 875	Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 500 : 331.0 : ← 4.0 : ← 7.0 : - : 500 : 145.0
rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 12.95 : + 0.05 : 500 : 14.10 : + 0.10 : 700 : 13.90 : + 0.10 : 875	Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 500 : 331.0 : ← 4.0 : ← 7.0 : - : 500 : 145.0
rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 12.95 : + 0.05 : 500 : 14.10 : + 0.10 : 700 : 13.90 : + 0.10 : 875	Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 500 : 331.0 : ← 4.0 : ← 7.0 : - 7.0 : - 500 : 145.0 : ← 1.0
rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 12.95 : + 0.05 : 500 : 14.10 : + 0.10 : 700 : 13.90 : + 0.10 : 875	Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 500 : 331.0 : ← 4.0 : ← 7.0 : - : 500 : 145.0
rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE	: 12.95 : + 0.05 : 500 : 14.10 : + 0.10 : 700 : 13.90 : + 0.10 : 875	Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 500 : 331.0 : ← 4.0 : ← 7.0 : - 7.0 : - 500 : 145.0 : ← 1.0
rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 12.95 : + 0.05 : 500 : 14.10 : + 0.10 : 700 : 13.90 : + 0.10 : 875	Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 500 : 331.0 : ← 4.0 : ← 7.0 : - 7.0 : - 500 : 145.0 : ← 1.0
rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE	: 12.95 : + 0.05 : 500 : 14.10 : + 0.10 : 700 : 13.90 : + 0.10 : 875	Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 500 : 331.0 : ← 4.0 : ← 7.0 : - 500 : 145.0 : ← 1.0 : ← 4.0
rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE	: 12.95 : + 0.05 : 500 : 14.10 : + 0.10 : 700 : 13.90 : + 0.10 : 875	Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 500 : 331.0 : ← 4.0 : ← 7.0 : - 500 : 145.0 : ← 1.0 : ← 4.0

Rated speed rpm : 100 rack travel mm : 11.65

H03

Rated speed rpm : 500

Tolerance mm	: +-	0.30
***************************************	:	105.0
Tolerance cm3/1000 strokes	: +-	15.0
Check tolerance cm3/1000s.	: +-	19.0

LOW IDLE

Rated speed rpm Del. quantity	:	300	
cm3/1000 strokes	:	23.0	
Tolerance cm3/1000 strokes	: +-	3.0	
Check tolerance cm3/1000s.	: +-	6.0	
Spreed Tolerance cm3/1000 strokes	:	8.0	
Check tolerance cm3/1000s.	:	12.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 14.03.97 Edition Test oil : ISO 4113

Combination No. : 0 402 746 633

Injection pump

Pump designation : PES6P120A720RS7366

EP type number : 0 412 726 933

Governor

Governer design. : RQ300/1050PA1344 Governer no. : 0 421 801 821

Cust. pert No. :

Customer-spec. information

Customer : IVECO-FRANCE : 8460.41R.7143

Power KW : 214.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C 40 Tolerance *C : +- 2.0

Overflow valve : 2 417 413 076

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 160 Tolerance l/h : + 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 20.50 Tolerance mm : + 0.50

Firing order : 1-5- 3- 6- 2-

: 4

Phasing : 0-60-120-180-240Tolerance : +0.30

Check

tolerance *NW : +- 0.50

Start of delivery mark

Check

tolerance *NW : + 0.40

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 11.55 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes :	234.0	Tolerance cm3/1000 strokes	: +- 1.0
Tolerance cm3/1000 strokes :	+ 1.0	Check tolerance cm3/1000s. Spreed	: +- 4.0
Check tolerance cm3/1000s.	+ 4.0	Tolerance cm3/1000 strokes Check tolerance	
Spreed	 ‡	cm3/1000s.	: 9.0
Tolerance cm3/1000 strokes :	5.0	RATED SPEED rack travel mm Rated speed rpm	: 10.50 : 1103
Check tolerance cm3/1000s. :	9.0	Tolerance 1/min Check speed 1/min	
•	300	rack travet mm Rated speed rpm Tolerance 1/min	: 1170
Tolerance mm :	5.50 + 0.10	Check speed 1/min	: - 20
Del. quantity cm3/1000 strokes : Tolerance cm3/1000 strokes :	23.0	rack travel mm Tolerance mm	: 0.50 : +- 0.50
Check tolerance cm3/1000s. :	+ 6.0	Rated speed rpm	: 1350
Spreed Tolerance cm3/1000 strokes : Check tolerance	8.0	LOW IDLE	
cm3/1000s. :	12.0	control lever position degree	: 74.0
(B) SETTING OF INJECT WITH GOVERNOR	TION PUMP	tolerance degree Testing:	
	<u>.</u> 1	Rated speed rpm	· 300
GUIDE SLEEVE POSITIO	W I	rack travel mm Tolerance mm	: 5.50
control lever position degree : Rated speed rpm :	109 500	rack travel mm Rated speed rpm Tolerance 1/min	
Rack travel in mm : Tolerance mm :	20.00 + 0.80	Rated speed rpm	: 200
Total dile imi		CRT mm min.	: > 7.00
FULL LOAD DELIVERY A	+	TORQUE CONTROL	
Rated speed rpm : Aneroid pressure hPa :	1050	Rated speed rpm rack travel mm	: 1050 : 11.55
Del. quantity cm3/1000 strokes :	+	Tolerance mm	: + 0.05
222 250 2002	+	Rated speed rpm	: 500

rack travel mm Tolerance mm	: 12.75 : + 0.10	‡
Rated speed rpm rack travel mm Tolerance mm	: 700 : 12.50 : +- 0.10	+
Rated speed rpm rack travel mm Tolerance mm	: 875 : 11.80 : +- 0.15	† † †
ANEROID/ALTITUDE COMPENSATOR TEST		- + + +
SETTING		. †
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 600 : 1200 : 12.80 : + 0.05	† + + †
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: : 600 : 9.60 : +- 0.20	T + + +
MEASUREMENT		Ŧ
Rated speed rpm	: 600	Ŧ
Pressure hPa rack travel mm Tolerance mm	: 260 : 10.40 : + 0.20	T +
Pressure hPa rack travel mm Tolerance mm	: 420 : 12.00 : + 0.05	+
Start interlock		‡
Rated speed rpm Rated speed rpm	: > 100 : < 250	Ī
Check speed 1/min Check	: > 80	Ī
speed 1/min	: < 260	‡
FUEL DELIVERY CHA	RACTERISTICS	- +
Aneroid pressure	4200	‡
hPa Rated speed rpm Del. quantity	: 1200 : 500	Ī
cm3/1000 strokes	: 264.0	Ŧ

Check tolerance cm3/1000s.: **←** 7.0 Aneroid pressure hPa Rated speed rpm 600 Del. quantity cm3/1000 strokes : 152.0 Tolerance cm3/1000 strokes : +-1.0 Check tolerance cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 11.60
Tolerance mm : + 0.30
Del. quantity
cm3/1000 strokes : 105.0
Tolerance
cm3/1000 strokes : + 15.0
Check tolerance
cm3/1000s. : + 19.0

LOW IDLE

Rated speed rpm : 300 Del. quantity cm3/1000 strokes : 23.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0

End of test specification sheet

Tolerance

cm3/1000 strokes : \leftarrow 4.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 13.03.97 : ISO 4113 Test oil

Combination No. : 0 402 846 061

Injection pump

Pump designation : PE6P120A320RS8024-1 EP type number : 0 412 826 029

Governor

Governer design. : RQV250...1100PA1072

: 3K

: 0 421 815 979 Governer no.

Cust. part No. : 477950-P05 v. 11.95

Customer-spec. information

Customer : VOLVO-TRUCK : TD74 EU Motor

Power KW : 169.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 : +- 2.0 Tolerance °C

Overflow valve : 2 417 413 089

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : 3.60 Tolerance mm : + 0.05 Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 7.20 Tolerance mm : \leftarrow 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240 Tolerance : +- 0.30

Check

tolerance °NW : +- 0.50

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 11.40 Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 175.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance + 4.0 + 4.0	Rated speed rpm : 390
+	guide sleeve
Spreed	travel mm : 3.22
+	Tolerance mm : + 0.25
Tolerance	
cm3/1000 strokes : 8.0	Rated speed rpm : 1390
+	guide sleeve
Check tolerance	travel mm : 13.50
cm3/1000s. : 11.0	Tolerance mm : +- 0.50
<u> </u>	
I	GUIDE SLEEVE POSITION
Rated speed rpm : 300	00202 02202 1 00212011
<u> </u>	
Rack travel in mm: 4.40	control lever
Tolerance mm : + 0.10 +	position degree : - 1
Del. quantity +	Rated speed rpm : 1290
cm3/1000 strokes : 23.0	7.50
Tolerance + cm3/1000 strokes : + 2.5 +	Rack travel in mm : 7.50
Check tolerance	Tolerance mm : +- 2.50
cm3/1000s. : +- 5.0	
Spreed	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance	TOLE LOND DELIVERY AT TOLE LOND OTO
cm3/1000 strokes : 5.0	Rated speed rpm : 1100
Check tolerance	Aneroid pressure
cm3/1000s. : 8.0 +	hPa : 1500
+	Del. quantity
+	cm3/1000 strokes : 175.0
(B) SETTING OF INJECTION PUMP	Tolerance
WITH GOVERNOR +	cm3/1000 strokes : + 1.0
†	Check tolerance cm3/1000s. : +- 4.0
GUIDE SLEEVE TRAVEL	cm3/1000S. : +- 4.0 Spreed
SOIDE OFFICE HAVE	Tolerance
Rated speed rpm : 1176	cm3/1000 strokes : 8.0
guide sleeve	Check tolerance
travel mm : 10.15	cm3/1000s. : 11.0
Tolerance min : 4- 0.25	
+	
Rated speed rpm : 250 +	
guide sleeve	CONTROL LEVER
travel mm : 1.33	annhant town
Tolerance mm : + 0.25	control lever position degree : 72.0
Rated speed rpm : 733	tolerance degree : +- 4.0
guide sleeve	totel alice degree 4.b
travel mm : 5.39	control lever
Tolerance mm : + 0.25	position degree : 118.0
+	tolerance degree : +- 4.0
Rated speed rpm : 307	•
guide sleeve +	RATED SPEED
travel mm : 2.29	rack travel mm : 10.40
Tolerance mm : + 0.25 +	Rated speed rpm : 1135
Poded around arm 1 757	Tolerance 1/min : +- 5
Rated speed rpm : 357	nack though me . / 00
guide sleeve + travel mm : 2.97 +	rack travel mm : 4.00 Rated speed rpm : 1210
Tolerance mm : + 0.25	Tolerance 1/min : +- 15
Total arise init	TOSCIONOC ITMINI . TOSCIONOC

rack travel mm Tolerance mm Rated speed rpm	: 0.50 : + 0.50 : 1320
LOW IDLE	
control lever position degree tolerance degree	: 65.0 : + 4.0
control lever position degree tolerance degree	: 19.0 : + 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 300 : 4.40 : + 0.10
Rated speed rpm	: 200
CRT mm min.	: > 6.50
Rated speed rpm	: 375
TORQUE CONTROL	
Reted speed rpm rack travel mm Tolerance mm	: 1100 : 11.40 : + 0.05
Rated speed rpm rack travel man Tolerance mm	: 650 : 9.10 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 300 : 8.30 : + 0.30
ANEROID/ALTITUDE COMPENSATOR TEST	

Tack travel mm : 7.20 Tolerance mm : + 0.10 MEASUREMENT Rated speed rpm : 1100 Pressure hPa : 580 rack travel mm : 3.50 Tolerance mm : + 0.20 Pressure hPa : 120 rack travel mm : 0.25 Tolerance mm : + 0.05 Start interlock FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1500 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 159.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000 strokes : 10.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 10.0 Check tolerance cm3/1000 strokes : 14.0 Aneroid pressure hPa : - Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 114.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 1.0 LOW IDLE Rated speed rpm : 300 Del. quantity Del. quantity		
Rated speed rpm : 1100 Pressure hPa : 580 rack travel mm : 3.50 Tolerance mm : + 0.20 Pressure hPa : 120 rack travel mm : 0.25 Tolerance mm : + 0.05 Start interlock FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1500 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 159.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s : + 5.0 Spreed Tolerance cm3/1000s : 14.0 Aneroid pressure hPa : - Rated speed rpm : 650 Del. quantity cm3/1000s : 14.0 Aneroid pressure hPa : - Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 114.0 Tolerance cm3/1000 strokes : 114.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 4.0		
Pressure hPa : 580 rack travel mm : 3.50 Tolerance mm : + 0.20 Pressure hPa : 120 rack travel mm : 0.25 Tolerance mm : + 0.05 Start interlock FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1500 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 159.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000s. : 14.0 Aneroid pressure hPa : - Rated speed rpm : 650 Del. quantity cm3/1000s. : 14.0 Aneroid pressure hPa : - Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 114.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0	MEASUREMENT	
rack travel mm : 3.50 Tolerance mm : + 0.20 Pressure hPa : 120 rack travel mm : 0.25 Tolerance mm : + 0.05 Start interlock FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1500 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 159.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s : + 5.0 Spreed Tolerance cm3/1000s strokes : 10.0 Check tolerance cm3/1000s : 14.0 Aneroid pressure hPa : - Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 114.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 4.0	Rated speed rpm	: 1100
rack travel mm : 0.25 Tolerance mm : + 0.05 Start interlock FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1500 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 159.0 Tolerance cm3/1000s strokes : + 2.0 Check tolerance cm3/1000s : + 5.0 Spreed Tolerance cm3/1000s trokes : 10.0 Check tolerance cm3/1000s : 14.0 Aneroid pressure hPa : - Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 114.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 4.0 LOW IDLE Rated speed rpm : 300	rack travel mm	: 3.50
FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1500 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 159.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 10.0 Check tolerance cm3/1000s. : 14.0 Aneroid pressure hPa : - Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 114.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 4.0 LOW IDLE Rated speed rpm : 300	rack travel mm	: 0.25
Aneroid pressure hPa : 1500 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 159.0 Tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 10.0 Check tolerance cm3/1000s. : 14.0 Aneroid pressure hPa : - Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 114.0 Tolerance cm3/1000 strokes : 114.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0	Start interlock	
Aneroid pressure hPa : 1500 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 159.0 Tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 10.0 Check tolerance cm3/1000s. : 14.0 Aneroid pressure hPa : - Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 114.0 Tolerance cm3/1000 strokes : 114.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0		
hPa : 1500 Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 159.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 10.0 Check tolerance cm3/1000s. : 14.0 Aneroid pressure hPa : - Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 114.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 4.0 LOW IDLE Rated speed rpm : 300	FUEL DELIVERY CHA	RACTERISTICS
<pre>cm3/1000 strokes : 159.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 10.0 Check tolerance cm3/1000s. : 14.0 Aneroid pressure hPa : - Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 114.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0</pre> LOW IDLE Rated speed rpm : 300	hPa Rated speed rpm	
cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 10.0 Check tolerance cm3/1000s. : 14.0 Aneroid pressure hPa : - Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 114.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 LOW IDLE Rated speed rpm : 300	cm3/1000 strokes	: 159.0
cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 10.0 Check tolerance cm3/1000s. : 14.0 Aneroid pressure hPa : - Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 114.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 LOW IDLE Rated speed rpm : 300	cm3/1000 strokes	: + 2.0
cm3/1000 strokes : 10.0 Check tolerance cm3/1000S. : 14.0 Aneroid pressure hPa : - Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 114.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 4.0 LOW IDLE Rated speed rpm : 300	cm3/1000s. Spreed	: ← 5.0
cm3/1000s. : 14.0 Aneroid pressure hPa : - Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 114.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 LOW IDLE Rated speed rpm : 300	cm3/1000 strokes	: 10.0
hPa Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 114.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 LOW IDLE Rated speed rpm : 300		: 14.0
Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 114.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 LOW IDLE Rated speed rpm : 300		: -
<pre>cm3/1000 strokes : 114.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0</pre> LOW IDLE Rated speed rpm : 300	Rated speed rpm Del. quantity	
Check tolerance cm3/1000s. : + 4.0 LOW IDLE Rated speed rpm : 300	cm3/1000 strokes Tolerance	
LOW IDLE Rated speed rpm : 300	Check tolerance	
Rated speed rpm : 300	cm3/TUUUS.	: +- 4.0
Rated speed rpm : 300		
	LOW IDLE	
vel. quantity		: 300
cm3/1000 strokes : 23.0	cm3/1000 strokes	: 23.0

SETTING

Rated speed rpm : 1100
Pressure hPa : 1500
rack travel mm : 11.40
Tolerance mm : +- 0.10

Pressure hPa : - Rated speed rpm : 1100

Rated speed rpm : 300
Del. quantity
cm3/1000 strokes : 23.0
Tolerance
cm3/1000 strokes : + 2.5
Check tolerance
cm3/1000s. : + 5.0

Spreed Tolerance

cm3/1000 strokes : Check tolerance cm3/1000s. : 5.0

8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 13.03.97 Test oil : ISO 4113

Combination No. : 0 402 846 062

Injection pump

Pump designation : PE6P12OA32ORS8024-1 EP type number : 0 412 826 029

Governor

Governer design. : RQV250...1100PA1072

: 4K

Governer no. : 0 421 815 978

Cust. part No. : 477951-P05 v. 11.95

Customer-spec. information

Customer : VCLVO-TRUCK
Motor : TD74 EU
Power KW : 191.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

: 40 temp. °C Tolerance °C : + 2.0

Overflow valve : 2 417 413 089

Inlet press. bar : Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2 x length mm : 600 2.0

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.60 Tolerance mm : + 0.05 Check

Rack travel in mm: 7.60

tolerance mm : \leftarrow 0.10

Tolerance mm : +-0.50

Firing order : 1-5-3-6-2-: 4

Phasing : 0-60-120-180-240 Tolerance : +- 0.30

Check

tolerance *NW : +- 0.50

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 12.50 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 189.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s.	: +- 4.0	+ Rated speed rpm : 390
Spreed		+ guide sleeve + travel mm : 3.22
Tolerance		Tolerance mm : +- 0.25
cm3/1000 strokes	: 8.0	+ Rated speed rpm : 1390 + guide sleeve
Check tolerance cm3/1000s.	: 11.0	travel mm : 13.50 Tolerance mm : +- 0.50
		+
Rated speed rpm	: 300	+ GUIDE SLEEVE POSITION
Rack travel in mm		† + control lever
Tolerance mm Del. quantity	: + 0.10	position degree : - 1 Rated speed rpm : 1290
cm3/1000 strokes	: 23.0	+
Tolerance cm3/1000 strokes	: + 2.5	+ Rack travel in mm : 7.50 + Tolerance mm : +- 2.50
Check tolerance cm3/1000s.	: +- 5.0	İ
Spreed Tolerance		FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes	: 5.0	Rated speed rpm : 1100
Check tolerance cm3/1000s.	: 8.0	+ Aneroid pressure + hPa : 1500
		Del. quantity cm3/1000 strokes : 189.0
(B) SETTING OF IN	JECTION PUMP	+ Tolerance
WITH GOVERNOR		the cm3/1000 strokes : +- 1.0 check tolerance
GUIDE SLEEVE TRAV	/FI	- cm3/1000s. : +- 4.0 - Spreed
		Tolerance
Rated speed rpm guide sleeve	: 1176	+ cm3/1000 strokes : 8.0 + Check tolerance
travel mm Tolerance mm	: 10.15 : + 0.25	cm3/1000s. : 11.0
		+
Rated speed rpm guide sleeve	: 250	CONTROL LEVER
travel mm	: 1.33	- antrol loven
Tolerance mm	: +- 0.25	+ control lever + position degree : 66.0
Rated speed rpm guide sleeve	: 733	tolerance degree : +- 4.0
travel mm	: 5.39	control lever
Tolerance mm	: ← 0.25	<pre>position degree : 119.0 tolerance degree : +- 4.0</pre>
Rated speed rpm guide sleeve	: 307	+ RATED SPEED
travel mm	: 2.29	rack travel mm : 11.50
Tolerance mm	: + 0.25	+ Rated speed rpm : 1135 - Tolerance 1/min : +- 5
Rated speed rpm	: 357	+
guide sleeve travel mm	: 2.97	rack travel mm : 4.00 Rated speed rpm : 1220
Tolerance mm	: +- 0.25	Tolerance 1/min : + 15

rack travel mm Tolerance mm Rated speed rpm	: 0.50 : +- 0.50 : 1320
LOW TOLE	
control lever position degree tolerance degree	: 72.0 : +- 4.0
control lever position degree tolerance degree	: 19.0 : +- 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 300 : 4.80 : +- 0.10
Rated speed rpm	: 200
CRT mm min.	: > 6.70
Rated speed rpm	: 375
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 1100 : 12.50 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 650 : 12.30 : ← 0.10
Rated speed rpm rack travel mm Tolerance mm	: 300 : 10.50 : +- 0.30
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 1100 : 1500 : 12 50

31.10
: 1100
: 750 : 4.20 : + 0.20
: 200 : 0.25 : + 0.05
RACTERISTICS
WELEKTOLTCO
: 1500 : 650
: 225.0
: ← 2.5
: +- 5.0
: 10.0
: 14.0
650
: 115.0
: + 1.0
: ← 1.0 : ← 4.0

rack travel mm : 7.75
Tolerance mm : + 0.10

LOW IDLE

Rated speed rpm : 300
Del. quantity
cm3/1000 strokes : 23.0
Tolerance
cm3/1000 strokes : + 2.5
Check tolerance
cm3/1000s. : + 5.0

rack travel mm : 12.50

Rated speed rpm : 1100

Tolerance mm

Pressure hPa

: +- 0.10

Spreed

Tolerance

cm3/1000 strokes : Check tolerance cm3/1000s. : 5.0

8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

Test oil

: 13.03.97 : ISO 4113

Combination No. : 0 402 846 063

Injection pump

Pump designation : PE6P12OA32ORS8024-1

EP type number : 0 412 826 029

Governor

Governer design. : RQV250...1100PA1072

: 5K

Governer no.

: 0 421 815 977

Cust. part No. : 477952-P05 v. 11.95

Customer-spec, information

Customer : VOLVO-TRUCK

Motor

: TD74 EU : 210.0

Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

40

Tolerance °C

2.0

Overflow valve : 2 417 413 089

Inlet press. bar :

2.5

Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

208.5

Tolerance bar : + 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter:

2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : +- 1.0

Prestroke mm : 3.60 Tolerance mm : +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 7.60

Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240
Tolerance : +- 0.30

Check

tolerance *NW : - 0.50

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 13.60

Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 211.0

Tolerance

cm3/1000 strokes : +- 1.0

H16

Check tolerance cm3/1000s.	: +- 4.0	+ Rated speed rpm : 390
CIID7 10003.	. +- 4.0	+ Rated speed rpm : 390 + guide sleeve
Spreed	the state of the s	travel mm : 3.22
·		+ Tolerance mm : +- 0.25
Tolerance		+
cm3/1000 strokes	: 8.0	+ Rated speed rpm : 1390
Check tolerance		+ guide sleeve + travel mm : 13.50
cm3/1000s.	: 11.0	Tolerance mm : +- 0.50
		+
Rated speed rpm	: 300	+ GUIDE SLEEVE POSITION
rated speed thii	. 300	I
Rack travel in mm	: 4.80	+ control lever
Tolerance mm	: +- 0.10	→ position degree : - 1
Del. quantity		Rated speed rpm : 1290
cm3/1000 strokes	: 23.0	+
Tolerance	. 25	+ Rack travel in mm : 7.50
cm3/1000 strokes Check tolerance	: +- 2.5	† Tolerance mm : + 2.50
cm3/1000s.	: +- 5.G	Ť
Spreed	. +- 3.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance		TOLL LOAD DELIVERY AT TOLL LOAD STOP
cm3/1000 strokes	: 5.0	Rated speed rpm : 1100
Check tolerance		Aneroid pressure
cm3/1000s.	: 8.0	† hPa : 1500
		+ Del. quantity
(2) 22-21/2 22 21/2		+ cm3/1000 strokes : 211.0
(B) SETTING OF IN	JECTION PUMP	+ Tolerance
WITH GOVERNOR		+ cm3/1000 strokes : +- 1.0 + Check tolerance
		+ cm3/1000s. : +- 4.0
GUIDE SLEEVE TRAV	EL	+ Spreed
		+ Tolerance
Rated speed rpm	: 1176	+ cm3/1000 strokes : 8.0
guide sleeve	4- 4-	+ Check tolerance
travel mm	: 10.15	+ cm3/1000s. : 11.0
Tolerance mm	: + 0.25	†
Rated speed rpm	: 250	
guide sleeve	-	+ CONTROL LEVER
travel mm	: 1.33	+
Tolerance mm	: ← 0.25	+ control lever
		+ position degree : 68.0
Rated speed rpm	: 733	tolerance degree : + 4.0
guide sleeve	. 570	† control lover
travel mm Tolerance mm	: 5.39 : + 0.25	+ control lever + position degree : 120.0
TO LET CETTUE MIN	0.0	tolerance degree : +- 4.0
Rated speed rpm	: 307	+ total differ degree . 1 = 4.0
guide sleeve		+ RATED SPEED
travel mm	: 2.29	+ rack travel mm : 12.60
Tolerance mm	: +- 0.25	+ Rated speed rpm : 1135
		+ Tolerance 1/min : + 5
Rated speed rpm	: 357	+
guide sleeve	: 357	rack travel mm : 4.00
		+

rack travel mm : 0.50 : + - 0.50Tolerance mm Rated speed rpm : 1320 LOW IDLE control lever position degree : 72.0 tolerance degree : +- 4.0 control lever position degree : 20.0 tolerance degree : +- 4.0 Testing: Rated speed rpm 300 : rack travel mm 4.80 : Tolerance mm : + 0.10 Rated speed rpm 200 : CRT mm min. : > 6.70 375 Rated speed rpm :

TORQUE CONTROL

Rated speed rpm

rack travel mm : 13.60 Tolerance mm : + 0.05 Rated speed rpm 650 : rack travel mm 13.10 Tolerance mm : +- 0.10

1100

300 Rated speed rpm 11.50 rack travel mm Tolerance nm : +- 0.30

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm 1100 Pressure hPa 1500 13.60 rack travel mm Tolerance mm : + 0.10

Pressure hPa Rated speed rpm : 1100 rack travel mm : 7.75 : + 0.10Tolerance mm

MEASUREMENT

: 1100 Rated speed rpm

885 Pressure hPa 5.50 rack travel mm : + 0.20Tolerance mm

: 190 Pressure hPa rack travel mm : 0.25 : +- 0.05 Tolerance mm

Start interlock

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 1500 : 650 Rated speed rpm

Del. quantity

cm3/1000 strokes : 248.0

Tolerance

cm3/1000 strokes : +-2.5 Check tolerance

cm3/1000s.

5.0

Spreed Tolerance

cm3/1000 strokes : 10.0

Check tolerance

cm3/1000s. 14.0

Aneroid pressure

Rated speed rpm 650

Del. quantity

cm3/1000 strokes : 115.0

Tolerance

cm3/1000 strokes : +-1.0

Check tolerance

cm3/1000s. : +-4.0

LOW IDLE

Rated speed rpm : 300

Del. quantity

cm3/1000 strokes : 23.0

Tolerance

cm3/1000 strokes : +-2.5

Check tolerance

cm3/1000s.: +-5.0

H18

Spreed

Tolerance cm3/1000 strokes : 5.0

Check tolerance cm3/1000s. 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 14,03,97 Test oil : ISO 4113

Combination No. : 0 402 946 015

Injection pump

Pump designation : PES6P120A320RS8038 EP type number : 0 412 926 025

Governor

Governer design. : RQV250...1000PA1239

Governer no. : 0 421 814 157

Cust. part No. : 1383795

Customer-spec. information Customer : SCANIA Motor : DSC 913

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. °C 40 Tolerance °C

Overflow valve : 2 417 413 082

Inlet press. bar : 2.5 Tolerance bar : ← 0.1

Overflow quantity

min. l/h : 105 Tolerance l/h : + 20.0

Test nozzle holde

assembly : 1 688 901 104

Opening pressure

: 251.5 bar Tolerance bar : +- 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.00 Folerance mm : +- 0.05

Check

: +- 0.10 tolerance mm

Rack travel in mm: 20.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

rnasing : 0-60-120-180-240
Tolerance : +- 0.30

Check

tolerance *NW : +- 0.50

Start of delivery blocking

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm : 12.70 Tolerance mm : \leftarrow 0.05

1	guide sleeve
Del. quantity	travel mm : 2.58
cm3/1000 strokes : 300.0	Tolerance mm : +- 0.25
Tolerance cm3/1000 strokes : + 1.0	Rated speed rpm : 372 guide sleeve
	travel mm : 3.27
Check tolerance cm3/1000s. : + 8.0	Tolerance mm : +- 0.25
Spreed	Rated speed rpm : 470 guide sleeve
	travel mm : 4.09
Tolerance cm3/1000 strokes : 8.0	Tolerance mm : +- 0.25
Check tolerance	Rated speed rpm : 1470 guide sleeve
em3/1000s. : 12.0 +	travel mm : 11.50
 ‡	Tolerance mm : +- 0.50
Rated speed rpm : 250	GUIDE SLEEVE POSITION
Rack travel in mm: 7.50 +	
Tolerance mm : + 0.10 +	control lever
Del. quantity	position degree : - 1
cm3/1000 strokes : 40.0	Rated speed rpm : 1260
Tolerance	Nated Speed (piii : 1200
cm3/1000 strokes : + 3.0	Rack travel in mm : 11.40
Check tolerance	Tolerance mm : +- 1.50
$cm3/1000s.$: \leftarrow 6.0	
Spreed	
Tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : 4.0 +	
Check tolerance	Rated speed rpm : 600
cm3/1000s. : 8.0	Aneroid pressure
†	hPa : 1500
(B) SETTING OF INJECTION PUMP	Del. quantity cm3/1000 strokes : 300.0
WITH GOVERNOR	Tolerance
-	cm3/1000 strokes : + 1.0
	Check tolerance
GUIDE SLEEVE TRAVEL	cm3/1000s. : +- 8.0
+	Spreed
Rated speed rpm : 1057	Tolerance
guide sleeve	cm3/1000 strokes : 8.0
travel mm : 7.89 + Tolerance mm : + 0.15 +	Check tolerance
Tolerance mm : + 0.15	cm3/1000s. : 12.0
Rated speed rpm : 250	
guide sleeve	CONTROL LEVED
guide sleeve + travel mm : 1.33	CONTROL LEVER
guide sleeve	
guide sleeve travel mm : 1.33 Tolerance mm : + 0.20	control lever
guide sleeve travel mm : 1.33 Tolerance mm : + 0.20 Rated speed rpm : 748	control lever position degree : 57.0
guide sleeve travel mm : 1.33 Tolerance mm : + 0.20 Rated speed rpm : 748 quide sleeve	control lever
guide sleeve travel mm : 1.33 Tolerance mm : + 0.20 Rated speed rpm : 748 guide sleeve	control lever position degree : 57.0
guide sleeve travel mm : 1.33 Tolerance mm : + 0.20 Rated speed rpm : 748 guide sleeve travel mm : 6.17	control lever position degree : 57.0 tolerance degree : + 4.0

RATED SPEED rack travel mm Rated speed rpm Tolerance 1/min Check speed 1/min	: 11.70 : 1045 : + 5 : + 10
rack travel mm Rated speed rpm Tolerance 1/min Check speed 1/min	: 4.00 : 1235 : + 15 : + 20
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : ← 0.50 : 1350
LOW IDLE	
control lever position degree tolerance degree	: 87.0 : + 4.0
control lever position degree tolerance degree	: 25.0 : + 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 250 : 7.50 : + 0.10
Rated speed rpm	: 150
CRT mm min.	: > 9.80
Rated speed rpm	: 300
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 600 : 12.70 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 12.70 : +- 0.10

SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 12.70 : +- 0.05
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 500 : 10.80 : + 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 38C : 11.25 : + 0.15
Pressure hPa rack travel mm Tolerance mm	: 760 : 12.15 : ← 0.05
Start interlock	
Rated speed rpm Rated speed rpm	: < 170 : > 100
Check speed 1/min Check	: < 190
speed 1/min	: > 30
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity	: 1500 : 1000
cm3/1000 strokes Tolerance	: 290.0
cm3/1000 strokes Check tolerance	: +- 4.0
cm3/1000s.	: +- 8.0
Aneroid pressure hPa Rated speed rpm	: - : 500
Del. quantity cm3/1000 strokes Tolerance	: 210.0
cm3/1000 strokes Check tolerance	: +- 1.0
cm3/1000s.	: + 6.0

ANEROID/ALTITUDE COMPENSATOR TEST

Rated speed rpm rack travel mm Tolerance mm	: 100 : 20.50 : + 0.50
Del. quantity cm3/1000 strokes Tolerance	: 265.0
cm3/1000 strokes	: +- 20.0
Check tolerance cm3/1000s.	: + 24.0

Rated speed rpm 250 Del. quantity cm3/1000 strokes : 40.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerence cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. 8.0

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

: 14.03.97 Edition Test oil : ISO 4113

Combination No. : 0 402 946 016

Injection pump

Pump designation : PES6P120A320RS8038

EP type number : 0 412 925 025

Governor

Governer design. : RQV250...1000PA1239

: 1

: 0 421 814 158 Governer no.

Cust. part No. : 1369528

Customer-spec. information

Customer : SCANIA Motor : DSC 912

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

tenmo. "C Tolerance °C 2.0

Overflow valve : 2 417 413 082

Inlet press. bar : 2.5

Tolerance bar : + 0.1

Overflow quantity

min. L/h : 110 Tolerance L/h : +- 20.0

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

: 251.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.00 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 20.50 Tolerance mm : \leftarrow 0.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240
Tolerance : + 0 20

Check

tolerance *NW : +- 0.50

Start of delivery blocking

Tolerance : + 0.50

Check

tolerance *NW : **←** 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm : 12.80

Tolerance mm : \leftarrow 0.05

}	guido al covo
Del. quantity	- guide sleeve - travel mm : 2.58
cm3/1000 strokes : 292.0	Tolerance mm : +- 0.25
Tolerance cm3/1000 strokes : +- 1.0	- Rated speed rpm : 372 - guide sleeve
	travel mm : 3.27
Check tolerance cm3/1000s. : + 9.0	Tolerance mm : +- 0.25
	- Rated speed rpm : 470
Spreed	guide sleeve travel mm : 4.09
Tolerance	- Tolerance mm : +- 0.25
cm3/1000 strokes : 8.0	•
	- Rated speed rpm : 1470
Check tolerance	- guide sleeve
cm3/1000s. : 12.0	- travel mm : 11.50
	Tolerance mm : + 0.50
†	•
Rated speed rpm : 250	- GUIDE SLEEVE POSITION
Rack travel in mm: 7.50	•
Tolerance mm : + 0.10	- control lever
Del. quantity	position degree : - 1
cm3/1000 strokes : 40.0	- Rated speed rpm : 1290
Tolerance	•
cm3/1000 strokes : +- 3.0	- Rack travel in mm : 11.30
Check tolerance	Tolerance mm : +- 1.50
cm3/1000s. : +- 6.0	•
Spreed	
Tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1900 strokes : 4.0 + Check tolerance +	Poted speed non
cm3/1000s. : 8.0	- Rated speed rpm : 600 - Aneroid pressure
	hPa : 1500
	Del. quantity
(B) SETTING OF INJECTION PUMP	- cm3/1000 strokes : 292.0
WITH GOVERNOR	- Tolerance
+	- cm3/1000 strokes : + 1.0
	- Check tolerance
GUIDE SLEEVE TRAVEL	- cm3/1000s. : + 9.0
1057	- Spreed
Rated speed rom: 1057	Tolerance
guide sleeve + travel mm : 7.89	cm3/1000 strokes : 8.0 Check tolerance
travel mm : 7.89 +	. Inerk Tolerance
Tolenance was . + C 15	
Tolerance mm : +- 0.15	cm3/1000s. : 12.0
+	
Rated speed rpm : 250	
Rated speed rpm : 250 guide sleeve	cm3/1000s. : 12.0
Rated speed rpm : 250	
Rated speed rpm : 250 guide sleeve travel mm : 1.33	cm3/1000s. : 12.0 CONTROL LEVER control lever
Rated speed rpm : 250 guide sleeve travel mm : 1.33 Tolerance mm : + 0.20 Rated speed rpm : 748	cm3/1000s. : 12.0 CONTROL LEVER control lever position degree : 57.0
Rated speed rpm : 250 guide sleeve travel mm : 1.33 Tolerance mm : + 0.20 Rated speed rpm : 748 guide sleeve	cm3/1000s. : 12.0 CONTROL LEVER control lever
Rated speed rpm : 250 guide sleeve travel mm : 1.33 Tolerance mm : + 0.20 Rated speed rpm : 748 guide sleeve travel mm : 6.17	cm3/1000s. : 12.0 CONTROL LEVER control lever position degree : 57.0 tolerance degree : +- 4.0
Rated speed rpm : 250 guide sleeve travel mm : 1.33 Tolerance mm : + 0.20 Rated speed rpm : 748 guide sleeve	cm3/1000s. : 12.0 CONTROL LEVER control lever position degree : 57.0 tolerance degree : + 4.0 control lever
Rated speed rpm : 250 guide sleeve travel mm : 1.33 Tolerance mm : + 0.20 Rated speed rpm : 748 guide sleeve travel mm : 6.17 Tolerance mm : + 0.25	cm3/1000s. : 12.0 CONTROL LEVER control lever position degree : 57.0 tolerance degree : + 4.0 control lever position degree : 120.0
Rated speed rpm : 250 guide sleeve travel mm : 1.33 Tolerance mm : + 0.20 Rated speed rpm : 748 guide sleeve travel mm : 6.17	cm3/1000s. : 12.0 CONTROL LEVER control lever position degree : 57.0 tolerance degree : + 4.0 control lever

RATED SPEED rack travel mm Rated speed rpm Tolerance 1/min Check speed 1/min rack travel mm Rated speed rpm	: 11.80 : 1045 : ← 5 : ← 10 : 4.00 : 1225
Tolerance 1/min Check speed 1/min	: + 15 : + 20
rack travel mm Tolerance mm Rated speed rpm	: 0.50 : + 0.50 : 1350
LOW IDLE	
control lever position degree tolerance degree	
control lever position degree tolerance degree	: 25.0 : +- 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 250 : 7.50 : + 0.10
Rated speed rpm	: 150
CRT mm min.	: > 9.70
Rated speed rpm	: 300
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 600 : 12.80 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 12.80 : +- 0.05
ANEROID/ALTITUDE	

SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 12.80 : + 0.05
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 500 : 10.80 : + 0.20
MEASUREMENT	
Rated speed rpm	: . 500
Pressure hPa rack travel mm Tolerance mm	: 250 : 11.30 : + 0.15
Pressure hPa rack travel mm Tolerance mm	: 620 : 12.30 : + 0.05
Start interlock	
Rated speed rpm Rated speed rpm	: > 100 : < 170
Check speed 1/min Check speed 1/min	: > 80 : < 190
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 1500 : 1000 : 282.0 : ← 4.0
cm3/1000s. Aneroid pressure	: +- 9.0
hPa Rated speed rpm Del. quantity	: 500
cm3/1000 strokes Tolerance	: 210.0
cm3/1000 strokes	: +- 1.0

STARTING FUEL DELIVERY

6.0

Check tolerance cm3/1000s.

COMPENSATOR TEST

Rated speed rpm rack travel mm Tolerance mm	: +	100 20.50 0.50
Del. quantity cm3/1000 strokes Tolerance	:	260.0
cm3/1000 strokes	: +-	20.0
Check tolerance cm3/1000s.	: +-	24.0

Rated speed rpm	•	250	
Del. quantity cm3/1000 strokes	:	40.0	
Tolerance cm3/1000 strokes	: +-	3.0	
Check tolerance cm3/1000S. Spreed	: +-	6.0	
Tolerance cm3/1000 strokes	:	4.0	
Check tolerance cm3/1000s.	:	8.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 14.03.97 : ISO 4113 Test oil

Combination No. : 0 402 946 020

Injection pump

Pump designation : PES6P120A320RS8038

EP type number : 0 412 926 025

Governor

Governer design. : RQV250...1000PA1239

Governer no. : 0 421 814 168

Cust. part No. : 1369545

Customer-spec. information Customer : SCANIA Motor : DSC 9,11

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 082

Inlet press. bar : Tolerance bar : + 0.1

Overflow quantity

min. L/h : 115 Tolerance l/h: + 10.0

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

: 251.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.00 Tolerance mm : +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 20.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240Tolerance : +- 0.30

Check

tolerance *NW : + 0.50

Start of delivery blocking

Tolerance : +- 0.50

Check

tolerance $^{\circ}NW$: +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm: 12.30

Tolerance mm : \leftarrow 0.05

		i mužda aliasus
N. 1		† guide sleeve
Del. quantity		+ travel mm : 4.09
cm3/1000 strokes	: 277.0	† Tolerance mm : + 0.25
		+
Tolerance		+ Rated speed rpm : 1470
cm3/1000 strokes	: + 1.0	+ guide sleeve
		+ travel mm : 11.50
Check tolerance		+ Tolerance mm : $+$ 0.50
cm3/1000s.	: ← 9.0	
Spreed		↓ GUIDE SLEEVE POSITION
opi eea		1
Tolerance		1
cm3/1000 strokes	: 8.0	control lever
CIID/ 1000 SCI OKES	. 0.0	
Charle had anoman		
Check tolerance	. 42.0	+ Rated speed rpm : 1310
cm3/1000s.	: 12.0	T Park travel := 144.40
		Rack travel in mm: 11.40
		† Tolerance mm : +- 1.30
	050	†
Rated speed rpm	: 250	
		+ FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm		+
Tolerance mm	: 0.10	+ Rated speed rpm : 600
Del. quantity		+ Aneroid pressure
cm3/1000 strokes	: 40.0	+ hPa : 1500
Tolerance		→ Del. quantity
cm3/1000 strokes	: +- 3.0	+ cm3/1000 strokes : 277.0
Check tolerance		+ Tolerance
cm3/1000S.	: +- 6.0	+ cm3/1000 strokes : + 1.0
Spreed		+ Check tolerance
Tolerance		+ cm3/1000s. : +- 9.0
cm3/1000 strokes	: 4.0	+ Spreed
Check tolerance	. 4.0	+ Tolerance
cm3/1000s.	: 8.0	- cm3/1000 strokes : 8.0
Chist 1000s.	. 0.0	Check tolerance
		+ cm3/1000s. : 12.0
(D) SETTING OF TH	LIECTION DIMO	T (m5/1000s 12.0
(B) SETTING OF IN	JECTION PUMP	T
WITH GOVERNOR		†
		CONTROL LEUED
		+ CONTROL LEVER
GUIDE SLEEVE TRAV	EL	.
	405	+ control lever
Rated speed rpm	: 1057	+ position degree : 56.0
guide sleeve		tolerance degree : +- 4.0
travel mm	: 7.89	+
Tolerance mm	: +- 0.15	+ control lever
		+ position degree : 118.0
Rated speed rpm	: 250	tolerance degree : +- 4.0
guide sleeve		+
travel mm	: 1.33	RATED SPEED
Tolerance mm	: +- 0.20	+ rack travel mm : 11.30
		Rated speed rpm : 1045
Rated speed rpm	: 748	+ Tolerance 1/min : + 5
guide sleeve	· • • • • • • • • • • • • • • • • • • •	Check
travel mm	: 6.17	+ speed 1/min : + 10
Tolerance mm	: + 0.25	+
IOCEIGITE IIII	· · · · · · · · · · · · · · · · · · ·	rack travel mm : 4.00
Rated speed rpm	: 470	Rated speed rpm : 1225
varen sheen thu	. 770	Tolerance 1/min : + 15
		T localdica William

Check speed 1/min	: ← 20 [†]	MEASUREMENT
rack travel mm	+	Rated speed rpm : 500
Tolerance mm Rated speed rpm	: + 0.50 +	Pressure hPa : 330 rack travel mm : 11.20 Tolerance mm : + 0.15
LOW IDLE		Pressure hPa : 600 rack travel mm : 11.90 Tolerance mm : +- 0.05
control lever position degree tolerance degree		Start interlock Rated speed rpm : < 170
control lever	1	Rated speed rpm : > 100
position degree tolerance degree		Check speed 1/min : < 190 Check
Testing:	‡	speed 1/min : > 80
Rated speed rpm rack travel mm Tolerance mm	: 7.20 	FUEL DELIVERY CHARACTERISTICS Aneroid pressure
Rated speed rpm	: 150	hPa : 1500 Rated speed rpm : 1000
CRT mm min.	:> 9.70	Del. quantity cm3/1000 strokes : 272.0
Rated speed rpm	: 300	Tolerance cm3/1000 strokes : + 4.0 Check tolerance
TORQUE CONTROL	I	cm3/1000s. : +- 9.0
Rated speed rpm rack travel mm Tolerance mm	: 12.30	Aneroid pressure hPa : – Rated speed rpm : 500
Rated speed rpm rack travel mm	: 12.30 +	Del. quantity cm3/1000 strokes : 210.0 Tolerance cm3/1000 strokes : +- 1.0
Tolerance mm	: + 0.05	Check tolerance cm3/1000s. : + 7.0
ANEROID/ALTITUDE COMPENSATOR TEST	‡	
SETTING	‡	STARTING FUEL DELIVERY
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1500 + : 12.30 +	Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 275.0
Pressure hPa	: -	Tolerance cm3/1000 strokes : +- 20.0 Check tolerance
Rated speed rpm rack travel mm Tolerance mm	: 10.80	cm3/1000s. : +- 24.0

Rated speed rpm Del. quantity	:	250	
cm3/1000 strokes	:	40.0	
cm3/1000 strokes	: +-	3.0	
Check tolerance cm3/1000S.	: +-	6.0	
Spreed Tolerance			
cm3/1000 strokes Check tolerance	;	4.0	
cm3/1000s.	:	8.0	

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 14.03.97 Test oil : ISO 4113

Combination No. : 0 402 946 021

Injection pump

Pump designation : PES6P12OA32ORS8038 EP type number : 0 412 926 025

Governor

Governer design. : RQ250/1000PA1265 Governer no. : 0 421 801 800

Cust. part No. : 1380278

Customer—spec. information Customer : SCANIA Motor : DSC 9.12

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 082

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 110 Tolerance L/h : +- 20.0

Test nozzle holde

assembly : 1 688 901 104

Opening pressure

bar : 251.5 Tolerance bar : +- 1.5 Test Lines : 1 680 750 008

Outside diameter : 5.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.00 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 20.50 Tolerance mm : + 0.20

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Tolerance : +- 0.30

Check

tolerance *NW : +- 0.50

Start of delivery blocking

Tolerance : \leftarrow 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm : 12.80 Tolerance mm : + 0.05

1	- guide sleeve
Del. quantity	travel mm : 3.91
cm3/1000 strokes : 292.0	Tolerance mm : +- 0.10
CHD/1000 Strokes . E/E.U	L Color will Color
Tolerance	Rated speed rpm : 490
cm3/1000 strokes : +- 1.0	guide sleeve
CIAST 1090 Set Office	travel mm : 4.50
Check tolerance	- Tolerance mm : + 0.10
cm3/1000s. : +- 9.0	-
	- Rated speed rpm : 1135
Spreed	- guide sleeve
	- travel mm : 5.50
Tolerance	- Tolerance mm : +- 0.10
cm3/1000 strokes : 8.0	<u>_</u>
	- Rated speed rpm : 1610
Check tolerance	- guide sleeve
cm3/1000s. : 12.0	travel mm : 11.50
	- Tolerance mm : +- 0.50
+	-
· · · · · · · · · · · · · · · · · · ·	
Rated speed rpm : 250	- GUIDE SLEEVE POSITION
Party Association and the Section 2000	<u>-</u>
Rack travel in mm: 7.50	-
Tolerance mm : + 0.10	- control lever - position degree : 108
Del. quantity	,
cm3/1000 strokes : 40.0	- Rated speed rpm : 600
Tolerance + 3.0	- - Rack travel in mm : 16.00
Check tolerance	- Tolerance mm : +- 1.00
cm3/1000s. : +- 6.0	- Toterance min . The 1.00
Spreed	
Tolerance	- FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : 4.0	-
Check tolerance	- Rated speed rpm : 600
cm3/1000s. : 8.0	- Aneroid pressure
	- hPa : 1500
4	- Del. quantity
(B) SETTING OF INJECTION PUMP	- cm3/1000 strokes : 292.0
WITH GOVERNOR	- Tolerance
+	- cm3/1000 strokes : + 1.0
	- Check tolerance
GUIDE SLEEVE TRAVEL	- cm3/1000s. : +- 9.0
. †	- Spreed
Rated speed rpm : 1062	- Tolerance
guide sleeve +	- cm3/1000 strokes : 8.0
travel mm : 4.83	- Check tolerance
Tolerance mm : \leftarrow 0.15	- cm3/1000s. : 12.0
Dated and mm . 250	•
Rated speed rpm : 250	
guide sleeve + travel mm : 1.43 +	- CONTROL LEVER
travel mm : 1.43 + Tolerance mm : + 0.20 +	- CONTINUE ELVER
TOLET CALLE IN THE TOLET	- - control lever
Rated speed rpm : 970	position degree : 47.0
guide sleeve	tolerance degree : +- 4.0
travel mm : 4.50	. Tio
Tolerance mm : + 0.10	control lever
	position degree : 109.0
Rated speed rpm : 377	tolerance degree : + 4.0
The same approximation of the St.	· · · · · · · · · · · · · · · · · · ·

		+ SETTING	
RATED SPEED rack travel mm Rated speed rpm Tolerance 1/min Check speed 1/min		Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1500 : 12.80
rack travel mm Rated speed rpm Tolerance 1/min Check	: 4.00 : 1220	Pressure hPa Rated speed rpm rack travel mm Tolerance mm	
speed 1/min	: +- 20	MEASUREMENT	
rack travel mm Tolerance mm	: 0.50 : ← 0.50	Rated speed rpm	: 500
Rated speed rpm		Pressure hPa rack travel mm Tolerance mm	: 250 : 11.30 : + 0.15
LOW IDLE		Pressure hPa rack travel mm Tolerance mm	: 620 : 12.30 : +- 0.05
control lever position degree		Start interlock	
tolerance degree	: ← 4.0	Rated speed rpm Rated speed rpm	
control lever position degree tolerance degree		Check speed 1/min Check	: > 80
Testing:		speed 1/min	: < 190
Rated speed rpm rack travel mm Tolerance mm	: 250 : 7.50 : + 0.10	FUEL DELIVERY CH	
Rated speed rpm	: 150	+ Aneroid pressure + hPa	: 1500
CRT mm min.	: > 9.00	Rated speed rpm Del. quantity	: 1000
Rated speed rpm	: 350	+ cm3/1000 strokes + Tolerance	: 282.0
		cm3/1000 strokes Check tolerance	
TORQUE CONTROL		cm3/1000s.	
Rated speed rpm rack travel mm Tolerance mm	: 12.80 : +- 0.05 : 1000	Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: - : 500
rack travel mm Tolerance mm	: 12.80 : + 0.05	+ Tolerance + cm3/1000 strokes + Check tolerance	
ANEROID/ALTITUDE COMPENSATOR TEST		- cm3/1000s.	: + 6.0

STARTING FUEL DELIVERY

Rated speed rpm rack travel mm Tolerance mm	:		100 20.50 0.50
Del. quantity cm3/1000 strokes Tolerance	:		275.0
cm3/1000 strokes	:	+-	20.0
Check tolerance cm3/1000s.	:	+-	24.0

Rated speed rpm 250 Del. quantity cm3/1000 strokes : 40.0 Tolerance 3.0 cm3/1000 strokes Check tolerance cm3/1000s.6.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 14.03.97 Edition : ISO 4113 Test oil

Combination No. : 0 402 946 022

Injection pump

Pump designation : PES6P120A320RS8038

EP type number : 0 412 926 025

Governor

Governer design. : RQ250/1000PA1265-1

Governer no. : 0 421 801 801

Cust. part No. : 1380280

Customer-spec. information Customer : SCANIA : DSC 9.11 Motor

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

40 temp. °C Tolerance °C 2.0

Overflow valve : 2 417 413 082

Inlet press. bar : 2.5 Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 110 Tolerance L/h : + 20.0

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

: 251.5 har Tolerance bar : +- 1.5 Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.00 Tolerance mm : + 0.05

Check

: + 0.10 tolerance mm

Rack travel in mm: 20.50 Tolerance mm : \leftarrow 0.20

: 1-5-3-6-2-Firing order

: 4

Phasing : 0-60-120-180-240

Tolerance : +- 0.30

Check

tolerance *NW : **←** 0.50

Start of delivery blocking

Tolerance : **←** 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

600 Rated speed rpm :

Rack travel in mm: 12.30

Tolerance mm : + 0.05

	🕂 guide sleeve
Del. quantity	† travel mm : 3.91
cm3/1000 strokes : 277.0	+ Tolerance mm : + 0.10
	+
Tolerance	+ Rated speed rpm : 490
cm3/1000 strokes : + 1.0	+ guide sleeve
	+ travel mm : 4.50
Check tolerance	+ Tolerance mm : +- 0.10
cm3/1000s. : +- 8.0	
CHD7 10003.	Rated speed rpm : 1135
Connection	guide sleeve
Spreed	
_ ,	+ travel mm : 5.50
Tolerance	Tolerance mm : + 0.10
cm3/1000 strokes : 8.0	†
	+ Rated speed rpm : 1610
Check tolerance	+ guide sleeve
cm3/1000s. : 12.0	† travel mm : 11.50
	+ Tolerance mm : + 0.50
	}
	<u> </u>
Rated speed rpm : 250	GUIDE SLEEVE POSITION
nated opeca i pin 1 230	1
Rack travel in mm : 7.30	1
Tolerance mm : +- 0.10	control lever
Del. quantity	1
cm3/1000 strokes : 40.0	Rated speed rpm : 600
Tolerance	†
cm3/1000 strokes : +- 3.0	Rack travel in mm: 16.00
Check tolerance	Tolerance mm : +- 1.00
cm3/1000s. : +- 6.0	+
Spreed	
Tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : 4.0	+
cm3/1000 strokes : 4.0	Rated speed rpm : 600
Check tolerance	Rated speed rpm : 600
******	Aneroid pressure
Check tolerance	Aneroid pressure hPa : 1500
Check tolerance cm3/1000S. : 8.0	Aneroid pressure hPa : 1500 Del. quantity
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP	Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0
Check tolerance cm3/1000S. : 8.0	Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP	Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : +- 1.0
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR	Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP	Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 8.0
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL	Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 8.0 Spreed
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR	Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 8.0 Spreed Tolerance
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL	Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 8.0 Spreed
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1062	Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 8.0 Spreed Tolerance
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1062 guide sleeve travel mm : 4.83	Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 8.0 Spreed Tolerance cm3/1000 strokes : 8.0
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1062 guide sleeve travel mm : 4.83	Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 8.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1062 guide sleeve travel mm : 4.83 Tolerance mm : 4.85	Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 8.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1062 guide sleeve travel mm : 4.83 Tolerance mm : 4.83 Tolerance mm : 4.15	Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 8.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1062 guide sleeve travel mm : 4.83 Tolerance mm : +0.15 Rated speed rpm : 250 guide sleeve	Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 8.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1062 guide sleeve travel mm : 4.83 Tolerance mm : 4.83 Tolerance mm : 250 guide sleeve travel mm : 250 guide sleeve travel mm : 1.43	Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 8.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1062 guide sleeve travel mm : 4.83 Tolerance mm : +0.15 Rated speed rpm : 250 guide sleeve	Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 8.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 CONTROL LEVER
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1062 guide sleeve travel mm : 4.83 Tolerance mm : 4.83 Rated speed rpm : 250 guide sleeve travel mm : 1.43 Tolerance mm : 1.43 Tolerance mm : + 0.20	Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 8.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 CONTROL LEVER control lever
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1062 guide sleeve travel mm : 4.83 Tolerance mm : 4.83 Tolerance mm : 250 guide sleeve travel mm : 1.43 Tolerance mm : 1.43 Tolerance mm : + 0.20 Rated speed rpm : 970	Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 8.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 CONTROL LEVER control lever position degree : 38.0
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1062 guide sleeve travel mm : 4.83 Tolerance mm : 4.83 Tolerance mm : 250 guide sleeve travel mm : 1.43 Tolerance mm : 1.43 Tolerance mm : 4.20 Rated speed rpm : 970 guide sleeve	Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 8.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 CONTROL LEVER control lever
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1062 guide sleeve travel mm : 4.83 Tolerance mm : 4.83 Tolerance mm : 250 guide sleeve travel mm : 1.43 Tolerance mm : 1.43 Tolerance mm : 4.80 Rated speed rpm : 970 guide sleeve travel mm : 970 guide sleeve travel mm : 4.50	Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 8.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 CONTROL LEVER control lever position degree : 38.0 tolerance degree : + 4.0
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1062 guide sleeve travel mm : 4.83 Tolerance mm : 4.83 Tolerance mm : 250 guide sleeve travel mm : 1.43 Tolerance mm : 1.43 Tolerance mm : 4.20 Rated speed rpm : 970 guide sleeve	Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 8.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 CONTROL LEVER control lever position degree : 38.0 tolerance degree : + 4.0 control lever
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1062 guide sleeve travel mm : 4.83 Tolerance mm : 4.83 Tolerance mm : 250 guide sleeve travel mm : 1.43 Tolerance mm : 1.43 Tolerance mm : 4.80 Rated speed rpm : 970 guide sleeve travel mm : 970 guide sleeve travel mm : 4.50	Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 277.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 8.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 CONTROL LEVER control lever position degree : 38.0 tolerance degree : + 4.0

DATED CDEED		†
RATED SPEED rack travel mm Rated speed rpm Tolerance 1/min Check	: 5	ANEROID/ALTITUDE COMPENSATOR TEST
speed 1/min	: +- 10	SETTING
rack travel mm Rated speed rpm Tolerance 1/min Check speed 1/min		Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 12.30 Tolerance mm : + 0.05 Pressure hPa : -
rack travel mm Tolerance mm Rated speed rpm	: ← 0.50	Rated speed rpm : 500 rack travel mm : 10.80 Tolerance mm : + 0.20
		MEASUREMENT
LOW IDLE		Rated speed rpm : 500
control lever	: 87.0	Pressure hPa : 330 rack travel mm : 11.20 Tolerance mm : + 0.15
position degree tolerance degree		Pressure hPa : 600 rack travel mm : 11.90
control lever position degree tolerance degree		+ Tolerance mm : + 0.05 Start interlock
Testing:		Rated speed rpm : < 170 Rated speed rpm : > 100
Rated speed rpm rack travel mm Tolerance mm	: 7.30 : +- 0.10 : 2.00	Check
Rated speed rpm Tolerance 1/min	: 350 : +- 20	+
Rated speed rpm	: 150	+ FUEL DELIVERY CHARACTERISTICS
CRT mm min.	: > 9.00	+ Aneroid pressure + hPa : 1500 + Rated speed rpm : 1000 - Del. quantity
TORQUE CONTROL		- cm3/1000 strokes : 272.0 - Tolerance
Rated speed rpm rack travel mm Tolerance mm	: 12.30	- cm3/1000 strokes : + 4.0 - Check tolerance - cm3/1000s. : + 8.0
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 12.30 : ← 0.05	Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity
		- cm3/1000 strokes : 210.0 - Tolerance - cm3/1000 strokes : +- 1.0
		•

Check tolerance cm3/1000s. : +-

+- 6.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50

Del. quantity

cm3/1000 strokes : 270.0

Tolerance

cm3/1000 strokes : +- 20.0

Check tolerance

cm3/1000s. : +- 24.0

LOW IDLE

Rated speed rpm : 250

Del. quantity

cm3/1000 strokes : 40.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. : +- 6.0

Spreed

Tolerance

cm3/1000 strokes : 4.0

Check tolerance

cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 14.03.97 Test oil : ISO 4113

Combination No. : 0 402 946 023

Injection pump

Pump designation : PES6P120A320RS8038

EP type number : 0 412 926 025

Governor

Governer design. : RQ250/1000PA1265-2

Governer no. : 0 421 801 808

Cust. part No. : 1385102

Customer—spec. information Customer : SCANIA Motor : DSC 9.15

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test bil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 082

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 110 Tolerance L/h : + 20.0

Test nozzle holde

assembly : 1 688 901 104

Opening pressure

bar : 251.5 Tolerance bar : +- 1.5 Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.00Tolerance mm : $\leftarrow 0.05$

Check

tolerance mm : + 0.10

Rack travel in mm : 20.50 Tolerance mm : + 0.20

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Tolerance : + 0.30

Check

tolerance °NW : +- 0.50

Start of delivery blocking

Tolerance : + 0.30

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm : 12.70

Tolerance mm : + 0.05 +	guide sleeve
	travel mm : 3.50
Del. quantity + cm3/1000 strokes : 300.0 +	Tolerance mm : +- 0.10
	Rated speed rpm : 490
Tolerance	guide sleeve
cm3/1000 strokes : +- 1.0 +	travel mm : 4.50 Tolerance mm : +- 0.10
Check tolerance	roter ance min
cm3/1000s. : +- 9.0 +	Rated speed rpm : 1129
	guide sleeve
Spreed	travel mm : 5.50 Tolerance mm : +- 0.10
Tolerance	rocerance han
cm3/1000 strokes : 8.0	Rated speed rpm : 1600
	guide sleeve
Check tolerance + cm3/1000s. : 12.0 +	travel mm : 11.50 Tolerance mm : +- 0.50
cm3/1000s. : 12.0 +	Toterance min : +- 0.50
+	GUIDE SLEEVE POSITION
Rated speed rpm : 250 +	
Rack travel in mm: 7.50	control lever
Tolerance mm : + 0.10 +	position degree : 108
Del. quantity +	Rated speed rpm : 600
cm3/1000 strokes : 40.0	Rack travel in mm : 16.00
Tolerance + 3.0 +	Tolerance mm : +- 1.00
Check tolerance	
cm3/1000s. : +- 6.0 +	
Spreed	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance + cm3/1000 strokes : 4.0 +	Rated speed rpm : 600
Check tolerance +	Aneroid pressure
cm3/1000s. : 8.0 +	hPa : 1500
1	Del. quantity cm3/1000 strokes : 300.0
(B) SETTING OF INJECTION PUMP	Tolerance
WITH GOVERNOR	cm3/1000 strokes : +- 1.0
†	Check tolerance
GUIDE SLEEVE TRAVEL	cm3/1000S. : +- 9.0 Spreed
GOIDE SCEEVE TRAVEC	Tolerance
Rated speed rpm : 1055	cm3/1000 strokes : 8.0
guide sleeve	Check tolerance cm3/1000s. : 12.0
travel mm : 4.82 + Tolerance mm : + 0.15 +	Cm5/10005. : 12.0
10001 00100 11111	
Rated speed rpm : 250	
guide sleeve + travel mm : 1.48 +	CONTROL LEVER
travel mm : 1.48 + Tolerance mm : + 0.20 +	control lever
+	position degree : 47.0
Rated speed rpm : 970	tolerance degree : +- 4.0
guide sleeve + travel mm : 4.50 +	control lever
Tolerance mm : 4.30 +	position degree : 109.0
+	tolerance degree : + 4.0
Rated speed rpm : 358 +	

		+
RATED SPEED rack travel mm Rated speed rpm Tolerance 1/min		ANEROID/ALTITUDE COMPENSATOR TEST
Check speed 1/min	; - 10	SETTING
rack travel mm Rated speed rpm Tolerance 1/min Check speed 1/min		Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 12.70 Tolerance mm : +- 0.05 Pressure hPa : -
rack travel mm Tolerance mm Rated speed rpm		Rated speed rpm : 500 rack travel mm : 9.90 Tolerance mm : + 0.20
		+ MEASUREMENT
LOW IDLE		Rated speed rpm : 500
control lever		+ Pressure hPa : 330 + rack travel mm : 10.65 + Tolerance mm : + 0.15
position degree tolerance degree		+ Pressure hPa : 710 + rack travel mm : 11.95
control lever position degree tolerance degree		Tolerance mm : + 0.05 Start interlock
Testing:		Rated speed rpm : < 170 Rated speed rpm : > 100
Rated speed rpm rack travel mm Tolerance mm	: 250 : 7.50 : ← 0.10	Check speed 1/min : < 190 Check
rack travel mm Rated speed rpm Tolerance 1/min		speed 1/min : > 80
Rated speed rpm	: 150	FUEL DELIVERY CHARACTERISTICS
CRT mm min.	: > 9.00	+ Aneroid pressure + hPa : 1500 + Rated speed rpm : 1000 - Del. quantity
TORQUE CONTROL		cm3/1000 strokes : 290.0
Rated speed rpm rack travel mm Tolerance mm	: 12.70	cm3/1000 strokes : + 4.0 Check tolerance cm3/1000s. : + 9.0
Rated speed rpm rack travel mm Tolerance mm	: 1000	Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 172.0 Tolerance cm3/1000 strokes : +- 1.0
		•

Check tolerance : + 6.0 cm3/1000s.

STARTING FUEL DELIVERY

100 Rated speed rpm 20.50 rack travel mm Tolerance mm : + 0.50 Del. quantity

cm3/1000 strokes : 270.0

Tolerance

cm3/1000 strokes : \leftarrow 20.0

Check tolerance cm3/1000s. : +- 24.0

LOW IDLE

Rated speed rpm 250 Del. quantity

cm3/1000 strokes : 40.0

Tolerance

cm3/1000 strokes : +-3.0

Check tolerance

cm3/1000s. : +-6.0

Spreed

Tolerance

4.0 cm3/1000 strokes :

Check tolerance

cm3/1000s. 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 14.03.97 Test oil : ISO 4113

Combination No. : 0 402 946 025

Injection pump

Pump designation : PES6P120A320RS8038 EP type number : 0 412 926 025

Governor

Governer design. : RQV250...1000PA1239

Governer no. : 0 421 814 178

Cust. part No. : 1383494

Customer-spec. information Customer : SCANIA

: DSC 915 Motor

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. °C : **←** 2.0 Tolerance °C

Overflow valve : 2 417 413 082

Inlet press. bar : 2.5 Tolerance bar : ← 0.1

Overflow quantity

min. L/h : 100 Tolerance L/h : + 20.0

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

: 251.5 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.00Tolerance mm : $\leftarrow 0.05$

Check

: +- 0.10 tolerance mm

Rack travel in mm : 20.50 Tolerance mm : \leftarrow 0.20

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

Tolerance : **←** 0.30

Check

tolerance *NW : +- 0.50

Start of delivery blocking

Tolerance : \leftarrow 0.50

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm : 12.70 Tolerance mm : \leftarrow 0.05

		1
		+ guide sleeve
Del. quantity		+ travel mm : 4.09
cm3/1000 strokes	: 300.0	+ Tolerance mm : $+$ 0.25
		<u> </u>
Tolerance		+ Rated speed rpm : 1470
cm3/1000 strokes	: +- 1.0	+ guide sleeve
		+ travel mm : 11.50
Check tolerance		+ Tolerance mm : + 0.50
cm3/1000s.	: +- 8.0	
	• • • • • • • • • • • • • • • • • • • •	
Spreed		GUIDE SLEEVE POSITION
op. cca		1 00200 002010 1 002112011
Tolerance		1
cm3/1000 strokes	: 8.0	+ control lever
CIEDY 1000 SCI ORES	. 0.0	position degree : - 1
Check tolerance		
	. 12.0	+ Rated speed rpm : 1265
cm3/1000s.	: 12.0	T Park Assout in many 44.40
		Rack travel in mm: 11.40
		† Tolerance mm : +- 2.00
	250	†
Rated speed rpm	: 250	
		+ FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mo		†
Tolerance mm	: ← 0.10	+ Rated speed rpm : 600
Del. quantity		+ Aneroid pressure
cm3/1000 strokes	: 40.0	+ hPa : 1500
Tolerance		+ Del. quantity
cm3/1000 strokes	: 3.0	+ cm3/1000 strokes : 300.0
Check tolerance		† Tolerance
cm3/1000s.	: +- 6.0	+ cm3/1000 strokes : + 1.0
Spreed		+ Check tolerance
Tolerance		+ cm3/1000s. : + 8.0
cm3/1000 strokes	: 4.0	Spreed
Check tolerance		+ Tolerance
cm3/1000s.	: 8.0	+ cm3/1000 strokes : 8.0
tilis/ 10000.	. 0.0	+ Check tolerance
		$\frac{1}{4}$ cm3/1000s. : 12.0
(B) SETTING OF IN	LIECTION DIMP	I
WITH GOVERNOR	40 FC 1 TO 4 1 O 1 11	I
MILL GOVERNOR		T
=::		_ I CONTROL LEVED
CUIDE CLEENE TOAL	.c.	- + CONTROL LEVER
GUIDE SLEEVE TRAV	/CL	T control lover
Dakad	. 1057	+ control lever
Rated speed rpm	: 1057	position degree : 57.0
guide sleeve	. 7.00	tolerance degree : +- 4.0
travel mm	: 7.89	†
Tolerance mm	: 0.15	+ control lever
		position degree : 120.0
Rated speed rpm	: 250	tolerance degree : +- 4.0
guide sleeve		†
travel mm	: 1.33	+ RATED SPEED
Tolerance mm	: - 0.20	+ rack travel mm : 11.70
		Rated speed rpm : 1045
Rated speed rpm	: 748	+ Tolerance 1/min : +- 5
guide sleeve		+ Check
travel mm	: 6.17	+ speed 1/min : + 10
Tolerance mm	: + 0.25	<u> </u>
·	-	rack travel mm : 4.00
Rated speed rpm	: 470	Rated speed rpm : 1235
upoud ipin		Tolerance 1/min : + 15
		. I to too will be trivilled to the

Check speed 1/min	: +- 20	‡	MEASUREMENT	
rack travel mm Tolerance mm	: 0.50 : + 0.50	1	Rated speed rpm	: 500
Rated speed rpm		<u> </u>	Pressure hPa rack travel mm Tolerance mm	: 330 : 10.65 : + 0.15
LOW IDLE		[Pressure hPa rack travel mm Tolerance mm	: 710 : 11.95 : ← 0.05
control lever position degree		I }	Start interlock	
tolerance degree	: ← 4.0	. †	Rated speed rpm Rated speed rpm	
position degree tolerance degree		Ī	Check speed 1/min Check	: < 190
Testing:		Ţ	speed 1/min	: > 80
Rated speed rpm rack travel mm Tolerance mm	: 250 : 7.50 : + 0.10	†	FUEL DELIVERY CHA	RACTERISTICS
Rated speed rpm	: 150	-	Aneroid pressure hPa Rated speed rpm	: 1500 : 1000
	: > 9.80	+	Del. quantity cm3/1000 strokes	
Rated speed rpm	: 300		Tolerance cm3/1000 strokes Check tolerance	: +- 4.0
TORQUE CONTROL		Ī	cm3/1000s.	: +- 8.0
Rated speed rpm rack travel mm Tolerance mm		+	Aneroid pressure hPa Rated speed rpm	: - : 500
Rated speed rpm	: 1000	<u>†</u>	Del. quantity cm3/1000 strokes Tolerance	
Tolerance mm		‡	cm3/1000 strokes Check tolerance	
ANEROID/ALTITUDE COMPENSATOR TEST	· 		cm3/1000s.	: +- 6.0
SETTING		‡	STARTING FUEL DEL	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 12.70 : ← 0.05	† † † †	Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes	: 100 : 20.50 : \(\dots \) 0.50 : 265.0
Pressure hPa Rated speed rpm rack travel mm	: 9.90	† † †	Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: + 20.0 : + 24.0
Tolerance mm	: ← 0.20	+		

Rated speed rpm 250 Del. quantity cm3/1000 strokes : 40.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes 4.0 Check tolerance cm3/1000s. 8.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 18.03.97 Test oil : ISO 4113

Combination No. : 0 403 444 151

Injection pump

Pump designation : PES4MW100/720RS1235

EP type number : 0 413 404 121

Governor

Governer design. : RQV300...1300MW139

Governer no. : 0 420 083 304

Cust. part No. : 0250742602

Customer—spec. information Customer : MB-NFZ Motor : 0M364A Power KW : 79.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm : 3.70
Tolerance mm : + 0.05
Check

tolerance mm : +- 0.10

Rack travel in mm : 20.00 Tolerance mm : + 1.00

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Tolerance : + 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

BASIC SETTING

Rated speed rpm : 1300

Rack travel in mm : 12.90 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 88.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000S. : +- 3.0

Spreed

Tolerance

cm3/1000 strokes : 3.5

	1	guide sleeve
Check tolerance		travel mm : 13.50
cm3/1000s.	: 6.0	Tolerance mm : + 0.50
(110) 100001	·	Total arise han
	+	
Dadad amand ama	. 700	GUIDE SLEEVE POSITION
Rated speed rpm :	: 500	
Rack travel in mm :	: 8.15 -	control lever
	+ 0.10	position degree : - 1
Del. quantity		Rated speed rpm : 1430
cm3/1000 strokes :	: 12.0	
Tolerance	 	Rack travel in mm : 10.00
cm3/1000 strokes :	: +- 2.0 +	Tolerance mm : +- 2.70
Check tolerance	+	
	: +- 4.5	
Spreed	t	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance	3.5	Rated speed rpm : 1300
cm3/1000 strokes : Check tolerance	<u> </u>	Rated speed rpm : 1300 Aneroid pressure
cm3/1000s. :	5.5	hPa : 700
(45) 10003.	1	Del. quantity
	1	cm3/1000 strokes : 88.0
(B) SETTING OF INJE	ECTION PUMP	Tolerance
WITH GOVERNOR	+	cm3/1000 strokes : + 1.0
	+	Check tolerance
	+	cm3/1000s. : +- 3.0
GUIDE SLEEVE TRAVEL	• †	Spreed
Dahad award sum	1354	Tolerance cm3/1000 strokes : 3.5
Rated speed rpm : guide sleeve	1354	Check tolerance
travel mm :	10,31	cm3/1000s. : 6.0
	+ 0.25	
	1	
Rated speed rpm :	300	
guide sleeve	+	CONTROL LEVER
travel mm :	1.27	
Tolerance mm :	+ 0.25 +	control lever
	†	position degree : 118.0
water speed that t	894	tolerance degree : +- 4.0
guide sleeve travel mm :	6.18	RATED SPEED
	+ 0.25	rack travel mm : 11.90
	1	Rated speed rpm : 1345
Rated speed rpm :	390	Tolerance 1/min : +- 5
guide sleeve	}	
travel mm :	2.39	rack travel mm : 4.00
Tolerance mm :	+ 0.25 +	Rated speed rpm : 1455
	,,, <u>,</u>	Tolerance 1/min : + 15
Rated speed rpm :	440 †	neels through the control of the
guide sleeve	3.01	rack travel mm : 0.50 Tolerance mm : +- 0.50
travel mm : Tolerance mm :	+ 0.25	Rated speed rpm : 1550
ioterance min	1	natea speca i piii . 1990
Rated speed rpm :	510	
guide sleeve	+	
travel mm :	3.56	
Tolerance mm :	+ 0.25 +	LOW IDLE
~	+	
Rated speed rpm :	1600 +	

		+ Rated speed rpm : > 100 + Rated speed rpm : < 200
control lever		Rated speed rpm : < 200
position degree	: 76.0	1
tolerance degree	· +- 4.0	+ Check
1010. 4.100 4.09. 00		+ speed 1/min :> 80
Testing:		+ Check
resting:		+ speed 1/min : < 230
0.4.4	. 700	T Speed I/min : \ 250
Rated speed rpm	: 500	†
rack travel mm	: 8.15	
Rated speed rpm rack travel mm Tolerance mm	: + 0.10	+ FUEL DELIVERY CHARACTERISTICS
		†
Rated speed rpm	: 200	+ Aneroid pressure
_		hPa : 700 Rated speed rpm : 600
CRT mm min.	: > 9.50	+ Rated speed rpm : 600
		+ Del. quantity + cm3/1000 strokes : 78.0
TORQUE CONTROL		+ Tolerance
		+ cm3/1000 strokes : + 1.5
Rated speed rom	: 1300	+ Check tolerance
rack travel mm	: 12.90	+ cm3/1000s. : +- 4.0
Rated speed rpm rack travel mm Tolerance mm	: + 0.05	+ Spreed
rocer direc imi		+ Tolerance
Reted speed rom	• 600	+ cm3/1000 strokes : 5.0
naceu speeu i pii	. 17 /0	Check tolerance
Rated speed rpm rack travel mm Tolerance mm	. 13.40	+ cm3/1000s. : 7.0
roterance mm	: - 0.10	T CM5/10005. : 7.0
Dahad ayand yan	. 4450	Ť
kated speed rom	: 1130	+ Aneroid pressure
rack travel mm	: 13.20	+ hPa : -
Rated speed rpm rack travel mm Tolerance mm	: ← 0.10	Rated speed rpm : 500
		+ Del. quantity
		+ cm3/1000 strokes : 48.0
ANEROID/ALTITUDE		+ Tolerance
COMPENSATOR TEST		+ cm3/1000 strokes : +- 1.0
		+ Check tolerance
		+ Check tolerance + cm3/1000s. : +- 3.0
SETTING		+
		+
Rated speed rpm Pressure hPa	: 500	+
Pressure hPa	: 700	+ STARTING FUEL DELIVERY
rack travel mm	: 13.40	+
Tolerance mm	: ← 0.10	+ Rated speed rpm : 100
		+ Del. quantity
Pressure hPa	: -	+ cm3/1000 strokes : 90.0
Rated speed rpm	500	+ Tolerance
Tolerance mm	: +- 0.05	+ cm3/1000 strokes : + 5.0
TOCCI di ICC IIII		+ Check tolerance
MEASUREMENT		+ cm3/1000s. : +- 8.0
MEASOREMEIAI		1
Dated around non	: 500	I
Rated speed rpm	: 500	I
Oncoming hos	: 230	
Pressure hPa		+ LOW IDLE
rack travel mm	: 0.90	T LOW IDLE
Tolerance mm	: +- 0.10	700
	450	Rated speed rpm : 300
Pressure hPa	: 150	+ Del. quantity
rack travel mm	: 0.40	+ cm3/1000 strokes : 12.0
Tolerance mm	: +- 0.10	+ Tolerance
		+ cm3/1000 strokes : + 2.0
Start interlock		+ Check tolerance
		+ cm3/1000s. : + 4.5

Spreed

Tolerance cm3/1000 strokes : 3.5

Check tolerance cm3/1000s. : 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 18.03.97 Edition : ISO 4113 Test oil

Combination No. : 0 403 476 149

Injection pump

Pump designation : PES6MW100/720RS1131 EP type number : 0 413 406 123

Governor Governer design. : RSV350...900MW0A406

Governer no. : 0 420 085 295

Cust. part No. : 0270741502

Customer-spec. information : MB-NFZ Customer : OM 366 A Motor Power KW : 101.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

40 temp. °C Tolerance °C 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar : +- 1.5 Tolerance bar

: 1 680 750 089 Test lines

Outside diameter : 8.0 x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm 3.75 : **←** 0.05 Tolerance mm Check

: + 0.10 tolerance mm

Rack travel in mm : 10.50 Tolerance mm : ← 1.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

Tolerance : **←** 0.50

Check

tolerance *NW : **←** 0.75

BASIC SETTING

Rated speed rpm : 880

Rack travel in mm: 11.60 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 89.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

: **←** 3.0 cm3/1000s.

Spreed

Tolerance cm3/1000 strokes : 3.5 Check tolerance	Check tolerance cm3/1000s. : 6.0
cm3/1000s. : 6.0	CONTROL LEVER
Rated speed rpm : 350	<pre>control lever position degree : 92.0 tolerance degree : +- 4.0</pre>
Rack travel in mm: 6.10 Tolerance mm: + 0.25 Del. quantity	RATED SPEED rack travel mm : 10.60
cm3/1000 strokes : 12.0 + Tolerance cm3/1000 strokes : + 2.0 +	Rated speed rpm : 933 Tolerance 1/min : +- 3
Check tolerance cm3/1000S. : + 4.5 Spreed Tolerance	rack travel mm : 4.00 Rated speed rpm : 1000 Tolerance 1/min : +- 5
cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 5.5	rack travel mm : 1.00 Tolerance mm : +- 0.70 Rated speed rpm : 1100
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION	control lever position degree : 73.0 tolerance degree : +- 4.0
control lever position degree : -3 Rated speed rpm : 800	Testing:
Rack travel in mm : 0.65 Tolerance mm : + 0.35	Rated speed rpm : 350 rack travel mm : 6.10 Tolerance mm : + 0.25
governor spring pre-tension click setting x : 4.25	rack travel mm : 2.00 Rated speed rpm : 410 Tolerance 1/min : +- 30
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100
Rated speed rpm : 380	CRT mm min. : > 19.00
Aneroid pressure hPa : 800 + Del. quantity +	TORQUE CONTROL
cm3/1000 strokes : 89.0 Tolerance cm3/1000 strokes : + 1.0	Rated speed rpm : 880 rack travel mm : 11.60 Tolerance mm : + 0.05
Check tolerance cm3/1000s. : + 3.0	ANEROID/ALTITUDE
Spreed Tolerance cm3/1000 strokes : 3.5	COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 800
rack travel mm : 11.60
Tolerance mm : +- 0.10

Pressure hPa : Rated speed rpm : 500
Tolerance mm : +- 0.10

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 375
rack travel mm : 1.10
Tolerance mm : + 0.10

Pressure hPa : 275
rack travel mm : 0.60
Tolerance mm : + 0.10

Start interlock

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 53.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 3.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 83.0

Tolerance

cm3/1000 strokes : +- 5.0

Check tolerance

cm3/1000s. : +- 8.0

LOW IDLE

Rated speed rpm : 350

Del. quantity

cm3/1000 strokes : 12.0

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : + 4.5

Spreed

Tolerance

cm3/1000 strokes : 3.5

Check tolerance

cm3/1000s. : 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 26.03.97 Test oil : ISO 4113

Combination No. : 0 400 074 903

Injection pump

Pump designation : PES4M55C32ORS169 EP type number : 0 410 054 959

Governor

Governer design. : RSF360/2300M60-9 Governer no. : 0 420 021 109

Cust. part No. :

Customer—spec. information
Customer : MB-PKW
Motor : 0M601-ECE
Power KW : 53.0

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 469 990 351

Inlet press. bar : 1.0

Test nozzle holde

assembly : 1 688 901 111

Opening pressure

bar : 148.5 Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.05
Tolerance mm : + 0.05
Check
tolerance mm : + 0.10

Rack travel in mm : 21.00 Tolerance mm : + 1.00

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Start of delivery blocking

*NW after s.o.d. : 19.50 Tolerance : + 0.20

Check

tolerance $^{\circ}NW$: \leftarrow 0.30

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm: 12.35 Tolerance mm: + 0.05

Del. quantity

cm3/1000 strokes : 33.5

Tolerance

cm3/1000 strokes : + 0.5

Check tolerance cm3/1000s · ←

cm3/1000s. : ← 1.5

Spreed

Tolerance

cm3/1000 strokes : 2.5

Check tolerance cm3/1000s. : 3.0 SET IDLE CONTROL LEVER POSITION 335 Rated speed rpm : Rated speed rpm : 1000 6.40 Rack travel in mm : : + 0.10 CRT mm max. : < 1.25 Tolerance mm Del. quantity cm3/1000 strokes : 6.5 Tolerance LOW IDLE cm3/1000 strokes : + 0.5Spreed Tolerance control lever position degree : cm3/1000 strokes : tolerance degree : +- 2.0 (B) SETTING OF INJECTION PUMP Setting point w/out bumper spring WITH GOVERNOR Rated speed rpm : 335 rack travel mm 6.40 SET IDLE AUXILIARY SPRING IDLE STAGE Rated speed rpm : Rack travel in mm : 6.50 rack travel mm : 5.00 : +- 0.10 Tolerance mm : \leftarrow 0.10 Tolerance mm 2.00 rack travel mm Rated speed rpm : FULL LOAD DELIVERY AT FULL LOAD STOP 660 Tolerance 1/min Rated speed rpm : 1000 Load pick-up Ref. pressure ALDA / ADA hPa : 1100 225 Del. quantity Rated speed rpm : > rack travel mm 9.00 cm3/1000 strokes : 33.5 Tolerance cm3/1000 strokes : \leftarrow 0.5 Rated speed rpm : 1000 Check tolerance : +- 1.5 CRT mm max. : < 1.25 cm3/1000s.Spreed rack travel mm 6.40 Tolerance 2.5 cm3/1000 strokes : Rated speed rpm : 335 Check tolerance cm3/1000s. 3.0 TORQUE CONTROL RATED SPEED Rated speed rpm 1000 rack travel mm 12.35 Tolerance mm : +- 0.05 control lever 50.0 position degree : Rated speed rpm : 1800 11.80 Rated speed rpm 2500 rack travel mm : + 0.10 8.70 Tolerance mm rack travel mm : + 0.20 Tolerance mm Rated speed rpm : 2200 2950 : 11.50 rack travel mm Rated speed rpm : + 0.10rack travel mm 0.50 Tolerance mm Tolerance mm : **←** 0.50

ADJUSTMENT TEST ADA/ALDA

		1
SETTING		Ref. pressure
OCT ITING		+ ALDA / ADA hPa : 1100
Rated speed rpm	: 1000	Rated speed rpm : 2500
Ref. pressure	. ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	+ rack travel mm : 8.70
ALDA / ADA hPa	: 950	+ Tolerance mm : + 0.20
rack travel mm	: -0.10	+ Del. quantity
Tolerance mm	: ← 0.10	- cm3/1000 strokes : 24.0
		+ Tolerance
MEASUREMENT		+ cm3/1000 strokes : + 2.0
		+ Check tolerance
Rated speed rpm	: 1000	+ cm3/1000s. : +- 3.0
Ref. pressure		+ Spreed
ALDA / ADA nPa	: 900	† Tolerance
rack travel mm	: -0.60	+ cm3/1000 strokes : 2.5
Tolerance mm	: ← 0.10	+ Check tolerance
		+ cm3/1000s. : 3.0
Ref. pressure	750	†
ALDA / ADA hPa	: 750	
rack travel mm	: -2.90	+ STARTING FUEL DELIVERY
Tolerance mm	: 0.20	100
		+ Rated speed rpm : 100
		+ rack travel mm : 21.50
FUEL DELIVERY CHA	DACTEDISTICS	Tolerance mm : + 1.50
FUEL DELIVERY CHA	RACIERISILOS	+ Del. quantity + cm3/1000 strokes : 52.0
Ref. pressure		+ Spreed
ALDA / ADA hPa	: 1100	+ Tolerance
Rated speed rpm	. 1800	+ cm3/1000 strokes : 6.0
Del. quantity	. 1800	T cmb/1000 strokes : 6.0
cm3/1000 strokes	: 33.8	I
Tolerance	. 33.0	I
cm3/1000 strokes	: + 0.8	
Check tolerance		LOW IDLE
	: +- 1.8	1
Spreed	· · · ·	Rated speed rpm : 335
Tolerance		+ Del. quantity
cm3/1000 strokes	. 25	+ cm3/1000 strokes : 7.8
FUIDA LEGIO SEL DECO	: 2.5	+ tm3/1000 strokes : 7.5
	: 2.3	
Check tolerance cm3/1000s.	: 2.3	+ Check tolerance + cm3/1000s. : + 2.3
Check tolerance		Check tolerance cm3/1000s. : +- 2.3 Spreed
Check tolerance cm3/1000s. Ref. pressure	: 3.0	Check tolerance cm3/1000s. : +- 2.3 Spreed Check tolerance
Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa	: 3.0 : 1100	Check tolerance cm3/1000s. : +- 2.3 Spreed
Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm	: 3.0 : 1100	Check tolerance cm3/1000s. : +- 2.3 Spreed Check tolerance
Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed	: 3.0 : 1100	Check tolerance cm3/1000s. : +- 2.3 Spreed Check tolerance
Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity	: 3.0 : 1100 : 2200	Check tolerance cm3/1000s. : +- 2.3 Spreed Check tolerance
Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes	: 3.0 : 1100 : 2200	Check tolerance cm3/1000s. : +- 2.3 Spreed Check tolerance
Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes Tolerance	: 3.0 : 1100 : 2200 : 35.0	Check tolerance cm3/1000s. : +- 2.3 Spreed Check tolerance
Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 3.0 : 1100 : 2200 : 35.0	Check tolerance cm3/1000s. : +- 2.3 Spreed Check tolerance cm3/1000s. : 1.5
Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 3.0 : 1100 : 2200 : 35.0 : + 1.0	Check tolerance cm3/1000s. : +- 2.3 Spreed Check tolerance cm3/1000s. : 1.5
Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 3.0 : 1100 : 2200 : 35.0	Check tolerance cm3/1000s. : +- 2.3 Spreed Check tolerance cm3/1000s. : 1.5
Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: 3.0 : 1100 : 2200 : 35.0 : + 1.0	Check tolerance cm3/1000s. : +- 2.3 Spreed Check tolerance cm3/1000s. : 1.5
Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: 3.0 : 1100 : 2200 : 35.0 : ← 1.0 : ← 2.0	Check tolerance cm3/1000s. : +- 2.3 Spreed Check tolerance cm3/1000s. : 1.5 control lever position degree : > 49.00
Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000s strokes Check tolerance cm3/1000s.	: 3.0 : 1100 : 2200 : 35.0 : ← 1.0 : ← 2.0	Check tolerance cm3/1000s. : +- 2.3 Spreed Check tolerance cm3/1000s. : 1.5 control lever position degree : > 49.00 control lever
Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance	: 3.0 : 1100 : 2200 : 35.0 : + 1.0 : + 2.0 : 2.5	Check tolerance cm3/1000s. : +- 2.3 Spreed Check tolerance cm3/1000s. : 1.5 control lever position degree : > 49.00
Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000s strokes Check tolerance cm3/1000s.	: 3.0 : 1100 : 2200 : 35.0 : ← 1.0 : ← 2.0	Check tolerance cm3/1000s. : +- 2.3 Spreed Check tolerance cm3/1000s. : 1.5 control lever position degree : > 49.00 control lever
Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance	: 3.0 : 1100 : 2200 : 35.0 : + 1.0 : + 2.0 : 2.5	Check tolerance cm3/1000s. : +- 2.3 Spreed Check tolerance cm3/1000s. : 1.5 control lever position degree : > 49.00 control lever position degree : < 46.50
Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance	: 3.0 : 1100 : 2200 : 35.0 : + 1.0 : + 2.0 : 2.5	Check tolerance cm3/1000s. : +- 2.3 Spreed Check tolerance cm3/1000s. : 1.5 control lever position degree : > 49.00 control lever position degree : < 46.50 SETTING PNEUMATIC FAST IDLE (PLA)
Check tolerance cm3/1000s. Ref. pressure ALDA / ADA hPa Rated speed rpm Spreed Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance	: 3.0 : 1100 : 2200 : 35.0 : + 1.0 : + 2.0 : 2.5	Check tolerance cm3/1000s. : +- 2.3 Spreed Check tolerance cm3/1000s. : 1.5 control lever position degree : > 49.00 control lever position degree : < 46.50

control lever

position degree : 14.0 tolerance degree : + 2.0

SETTING/TESTING ELECTRONIC IDLE REGULATION (ELR)

Rated speed rpm : 360

Rack travel in mm : 13.00 Tolerance mm : ← 0.70

Del. quantity

cm3/1000 strokes : 34.0

Tolerance

cm3/1000 strokes : - 3.5

Current A : 1.80

Rated speed rpm : 2950

Rack travel in mm : 0.50 Tolerance mm : + 0.50

Current short-

churation A : 3.00

Starting test

Rated speed rpm : 100

Current A : 1.80

TESTING PNEUMATIC SHUTOFF DEVICE

Rated speed rpm : 335 Vacuum hPa : -450.0

vacuum nea : -450.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 26.03.97 : ISO 4113 Test oil

Combination No. : 0 401 876 211

Injection pump

Pump designation : PE6P110A320RS350 EP type number : 0 411 816 109

Governor

Governer design. : RSV300...1100P1/816D

: R

: C 421 835 083 Governer no.

Cust. part No. :

Customer-spec. information

Customer : RENAULT V.I. : MDS 063540 Motor Power KW : 205.9

TEST BENCH REQUIREMENTS

Test oil inlet

40 temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

bar 173.5 Tolerance bar : **←** 1.5

: 1 680 750 015 Test lines

Outside diameter :

x inside diameter: 1.5

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 1.35 : + 0.05 Tolerance mm

Check

: + 0.10tolerance mm

Rack travel in mm : 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasina

Tolerance : +- 0.30

Check

tolerance *NW : **←** 0.50

Start of delivery mark

Tolerance : +- 0.50

Check

tolerance *NW : +- 0.75

Barrel no. ; 3

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 12.75 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 167.5

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance cm3/1000s. : + 3.5	Check tolerance cm3/1000s. : 7.5
Spreed	
Tolerance cm3/1000 strokes : 4.0	CONTROL LEVER
Check tolerance cm3/1000s. : 7.5	position degree : 64.0 tolerance degree : + 4.0
Rated speed rpm : 300	RATED SPEED rack travel mm : 11.70 Rated speed rpm : 1145 Tolerance 1/min : +- 5
Rack travel in mm: 6.40	
Tolerance mm : ← 0.10 +	rack travel mm : 4.00
Del. quantity	Rated speed rpm : 1215
cm3/1000 strokes : 13.0	Tolerance 1/min : +- 15
Tolerance	
cm3/1000 strokes : +- 4.0 +-	rack travel mm : 1.00
Check tolerance	loterance mm : + 0.70
cm3/1000s. : \leftarrow 6.5	Rated speed rpm : 1300
Spreed	
Tolerance +	
cm3/1000 strokes : 4.5 +	
Check tolerance	
cm3/1000s. : 7.5	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	<pre>control lever position degree : 30.0 tolerance degree : +- 4.0</pre>
+	
CUTAT OF SELECT DOCUTANT	Setting point w/out bumper spring
GUIDE SLEEVE POSITION +	Detail aread run . 700
†	Rated speed rpm : 300
control lever	rack travel mm : 6.90 Tolerance mm : +- 0.10
position degree : - 3	rocerance min . To 0.10
Rated speed rpm : 800	Testing:
1	
Rack travel in mm: 0.65	Rated speed rpm : 300
Tolerance mm : + 0.35 +	rack travel mm : 6.40 Tolerance mm : +- 0.10
+	Tolerance mm : +- 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 2.00
Pated aread are a 1400	Rated speed rpm : 530
Rated speed rpm : 1100 +	Tolerance 1/min : +- 30
Aneroid pressure + Pa : 700 + Pa	<u> </u>
Del. quantity	TORQUE CONTROL
cm3/1000 strokes : 167.5	FORQUE CONTROL
Tolerance	Rated speed rpm : 1100
cm3/1000 strokes : +- 1.0	rack travel mm : 12.75
Check tolerance	Tolerance mm : + 0.05
cm3/1000s. : + 3.5	The second control of the second control of
Spreed	Rated speed rpm : 1000
Tolerance	rack travel mm : 13.00
cm3/1000 strokes : 4.0	Tolerance mm : +- 0.10
· ·	

Rated speed rpm rack travel mm Tolerance mm ANEROID/ALTITUDE	: 700 : 13.60 : + 0.10
COMPENSATOR TEST	
SETTING	
Dated speed nom	: 500
Rated speed rpm Pressure hPa	: 500 : 700 : 13.60
rack travel mm	
Tolerance mm	: + 0.10
Pressure hPa	: -
Rated speed rpm	
rack travel mm Tolerance mm	: 10.75 : ← 0.05
locerance man	0.05
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa	: 220
rack travel mm	
Tolerance mm	: 11.55 : + 0.15
Pressure hPa	: 380
rack travel mm	: 12.85
Tolerance mm	: ← 0.05
Start interlock	
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	. 700
hPa Rated speed rpm	: 700 : 650
Del. quantity	. 650
cm3/1000 strokes	: 182.5
Tolerance cm3/1000 strokes	: +- 2.5
Check tolerance	• • •• •
cm3/1000s.	: ← 5.5
Aneroid pressure	
hPa	: - : 350
Rated speed rpm Del. quantity	: 350
cm3/1000 strokes	: 111.0
Tolerance	20
cm3/1000 strokes	: + 2.0

STARTING FUEL DELIVERY

Rated speed rpm rack travel mm Tolerance mm	:		100 20.25 0.75
Del. quantity	•	•	• • • • • • • • • • • • • • • • • • • •
cm3/1000 strokes	:		170.0
Tolerance cm3/1000 strokes Check tolerance	:	+-	10.0
cm3/1000s.	:	+-	14.0

LOW IDLE

LOM IDLE			
Rated speed rpm Del. quantity	:	300	
cm3/1000 strokes Tolerance	:	13.0	
cm3/1000 strokes Check tolerance	: +	⊢ 4.0	
cm3/1000s.	: +	⊢ 6.5	
Spreed Tolerance			
cm3/1000 strokes	:	4.5	
Check tolerance cm3/1000s.	:	7.5	

End of test specification sheet

Check tolerance cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition

: 25.03.97 Test oil : ISO 4113

Combination No. : 0 402 646 626

Injection pump

Pump designation : PE6P12DA32DRS7299

EP type number : 0 412 626 885

Governor

Governer design. : RQV275...1000PA1076K

Governer no. : 0 421 815 357

Cust. part No. : 1280160

Customer-spec. information

Customer : DAF

Motor : WS 268 M Power KW : 268.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Tolerance bar : + 0.1

Overflow quantity

min. L/h : 160 Tolerance L/h : +- 20.0

Test nozzle holde assembly : 1 688 901 105

Opening pressure

bar : 208.5
Tolerance bar : + 1.5

K06

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.85
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240Tolerance : $\leftarrow 0.30$

Check

tolerance *NW : +- 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 980

Rack travel in mm: 13.55

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 250.0

 .			
Tolerance		uide sleeve	-
cm3/1000 strokes : +- 1.0		ravel mm :	3.17
	+ To	olerance mm :	+- 0.25
Check tolerance	+		
cm3/1000s. : +- 4.0	. ⊢ Ra	ated speed rpm :	390
		uide sleeve	
Spreed		ravel mm :	3.79
			+- 0.25
Tolerance	1		0.23
cm3/1000 strokes : 5.0		ated speed rpm :	1310
· · · · · · · · · · · · · · · · · · ·		uide sleeve	1510
Check tolerance		ravel mm :	13.50
cm3/1000s. : 9.0			+ 0.50
CIRD/ 10005 /. 0	Τ ''	oterance mm .	 0.50
	T		
	Ť -	LIDE CLEEVE DOCTE	CON
Defeat aread area 275	, † 6	UIDE SLEEVE POSITI	.OFI
Rated speed rpm : 275	Ť		
Deal Annual Same - 1 00	†		
Rack travel in mm: 4.80		ontrol lever	4
Tolerance mm : + 0.10	1	osition degree :	- 1
Del. quantity		ated speed rpm :	1130
_cm3/1000 strokes : 17.0	•		40.40
Tolerance		ack travel in mm :	
cm3/1000 strokes : +- 3.0	+ To	olerance mm :	+ 1.30
Check tolerance	+		
cm3/1000s. : + 6.0			
Spreed	. Fi	ULL LOAD DELIVERY	AT FULL LOAD STOP
Tolerance	+		
cm3/1000 strokes : 8.0	+ Ra	ated speed rpm :	980
Check tolerance		neroid pressure	
cm3/1000s. : 12.0	∔ hF	Pa :	-
	+ De	el. quantity	
	+ cn	m3/1000 strokes :	250.0
(B) SETTING OF INJECTION PUM	Р 🕂 То	olerance	
WITH GOVERNOR	+ cn	m3/1000 strokes :	+- 1.0
	3	heck tolerance	· -
			+- 4.0
GUIDE SLEEVE TRAVEL	•	oraed	
	} <u>-</u> `	olerance	
Rated speed rpm : 1045		m3/1000 strokes :	5.0
guide sleeve	•	heck tolerance	
travel mm : 9.82		n3/1000s. :	9.0
Tolerance mm : +- 0.20			·• U
TO COT CITIES IN THE TOTAL CONTROL	I		
Rated speed rpm : 275	Ι _		
guide sleeve	I	ONTROL LEVER	
travel mm : 2.14		MITTOL LEVER	
Tolerance mm : + 0.15		ontrol lever	
Toterance min : TO 0.13			120 0
Rated speed rpm : 689		osition degree :	· -
	T "	olerance degree :	T- 4.U
guide sleeve	† _,	ATEN COPEN	
travel mm : 6.43		ATED SPEED	12 FF
Tolerance mm : \leftarrow 0.25		ack travel mm :	12.55
Debad speed : 20/			1042
Rated speed rpm : 284	† 10	olerance 1/min :	- 5
guide steeve	†	anda Amarica III i	/ 60
travel mm : 2.27	•	ack travel mm :	4.00
Tolerance mm : + 0.25		ated speed rpm :	1160
	† To	olerance 1/min :	+ 15
Rated speed rpm : 334	+		

rack travel mm : 0.70 Tolerance mm : ← 0.70 Tolerance mm : \leftarrow 0.10 Rated speed rpm : 1275 **MEASUREMENT** Rated speed rpm 980 Pressure hPa 720 LOW IDLE rack travel mm 12.25 Tolerance mm : +- 0.05 control lever Pressure hPa 360 position degree : 74.0 rack travel mm 9.80 : tolerance degree : +- 4.0 Tolerance mm : +- 0.10 Testing: Start interlock Rated speed rpm : 275 rack travel mm 4.80 : **←** 0.10 Tolerance mm FUEL DELIVERY CHARACTERISTICS Rated speed rpm 175 : Aneroid pressure hPa CRT mm min. 7.50 : > 750 Rated speed rpm : Del. quantity cm3/1000 strokes : Rated speed rpm : 275 263.0 Tolerance cm3/1000 strokes : +-2.0 TORQUE CONTROL Check tolerance cm3/1000s. : +-5.0 980 Rated speed rpm : Spreed rack travel mm 13.55 Tolerance : **←** 0.05 Tolerance mm cm3/1000 strokes : 8.0 Check tolerance Rated speed rpm : 750 12.0 cm3/1000S. rack travel mm : 13.05 Tolerance mm : **←** 0.05 Aneroid pressure hPa 000 Rated speed rpm Rated speed rpm 600 rack travel mm 12.10 Del. quantity cm3/1000 strokes : : + 0.10Tolerance mm 154.0 Tolerance Rated speed rpm 500 cm3/1000 strokes : +-1.0 rack travel mm : 11.70 Check tolerance : +- 0.10 cm3/1000s. Tolerance mm : +--4.0 ANEROID/ALTITUDE COMPENSATOR TEST SETTING LOW IDLE Rated speed rpm 980 Rated speed rpm : 275 Pressure hPa 1500 Del. quantity rack travel mm 13.55 cm3/1000 strokes : 17.0 Tolerance mm Tolerance : +- 0.05 cm3/1000 strokes : +-3.0 Pressure hPa Check tolerance

cm3/1000s.

Spreed

6.0

: +-

Rated speed rpm

rack travel mm : 8.60

980

Tolerance

cm3/1000 strokes : 8.0

Check tolerance cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 26.03.97 : ISO 4113

Combination No. : 0 402 648 701

Injection pump

Pump designation : PE8P120A320LS7906 EP type number : 0 412 628 921

Governor

Governer design. : RQ300/1050PA1341 Governer no. : 0 421 801 819

Cust. part No. : 04222 3944 KY

Customer-spec. information

Customer : KHD

Motor : BF8M1015/C Power KW

: 400.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 : +-Tolerance °C 2.0

Overflow valve : 2 417 413 033

Inlet press. bar : Tolerance bar : + 0.1

Overflow quantity

min. L/h : 220 Tolerance l/h : +- 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 Tolerance bar : \leftarrow 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm 4.05 : +- 0.05 Tolerance mm

Check

: **←** 0.10 tolerance mm

Rack travel in mm : 10.50 Tolerance mm : ← 1.50

: 8-7-2-6-5 Firing order

: - 3- 1

Phasing : 0-45-90-135-180

: -270-315 Tolerance : +- 0.30

Check

tolerance *NW : **←** 0.50

Start of delivery blocking

*NW after s.o.d. : 315.00

Tolerance

: **←** 0.50

Check

tolerance *NW : ← 0.75

Barrel no. : 8

BASIC SETTING

Rated speed rpm : 1050

	_
Rack travel in mm : 14.00 Tolerance mm : +- 0.05	Rated speed rpm : 434 guide sleeve
	+ travel mm : 3.65
Del. quantity	+ Tolerance mm : + 0.10
cm3/1000 strokes : 350.0	T Total differential . Total
chist ludu strokes : 330.0	T
	+ Rated speed rpm : 590
Tolerance	+ guide sleeve
cm3/1000 strokes : + 1.0	+ travel mm : 6.00
	+ Tolerance mm : +- 0.10
Charle de Langue	T Total ance min : T U.10
Check tolerance	T
cm3/1000s. : +- 4.0	+ Rated speed rpm : 1290
	+ guide sleeve
Spreed	+ travel mm : 11.50
-10.	+ Tolerance mm : +- 0.50
Tolerance	T roter drive limit . T 0.00
	· †
cm3/1000 strokes : 6.0	
	+ GUIDE SLEEVE POSITION
Check tolerance	+
cm3/1000s. : 9.0	1
· · · · · · · · · · · · · · · · · · ·	- control lever
The state of the s	
	+ position degree : 90
	+ Rated speed rpm : 700
Rated speed rpm : 300	+
	+ Rack travel in mm : 12.20
Rack travel in mm : 5.00	+ Tolerance mm : + 0.80
Tolerance mm : +- 0.10	1 Occi di loc imi
	T
Del. quantity	
cm3/1000 strokes : 23.0	+ FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance	+
cm3/1000 strokes : +- 3.0	+ Rated speed rpm : 1050
Check tolerance	Aneroid pressure
	Android pressure
$cm3/1000s.$: \leftarrow 6.0	├ hPa : 1700
cm3/1000s. : +- 6.0 Spreed	† hPa : 1700 † Del. quantity
cm3/1000s. : +- 6.0 Spreed Tolerance	├ hPa : 1700
cm3/1000s. : +- 6.0 Spreed	† hPa : 1700 † Del. quantity
cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0	hPa : 1700 Del. quantity cm3/1000 strokes : 350.0 Tolerance
cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance	hPa : 1700 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0
cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0	hPa : 1700 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance
cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance	hPa : 1700 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0
cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0	hPa : 1700 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed
cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP	hPa : 1700 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance
cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0	hPa : 1700 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance
cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP	hPa : 1700 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance
cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP	hPa : 1700 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance
cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR	hPa : 1700 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0
cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP	hPa : 1700 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance
cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (8) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL	hPa : 1700 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance
cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1108	hPa : 1700 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 9.0
cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (8) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1108 guide sleeve	hPa : 1700 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance
cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1108 guide sleeve travel mm : 6.53	hPa : 1700 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 9.0 CONTROL LEVER
cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (8) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1108 guide sleeve	hPa : 1700 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 9.0
cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1108 guide sleeve travel mm : 6.53	hPa : 1700 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 9.0 CONTROL LEVER control lever
cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1108 guide sleeve travel mm : 6.53 Tolerance mm : + 0.15	hPa : 1700 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 101.0
cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1108 guide sleeve travel mm : 6.53 Tolerance mm : + 0.15 Rated speed rpm : 300	hPa : 1700 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 9.0 CONTROL LEVER control lever
cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1108 guide sleeve travel mm : 6.53 Tolerance mm : + 0.15 Rated speed rpm : 300 guide sleeve	hPa : 1700 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 101.0 tolerance degree : + 4.0
cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (8) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1108 guide sleeve travel mm : 6.53 Tolerance mm : + 0.15 Rated speed rpm : 300 guide sleeve travel mm : 1.60	hPa : 1700 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 101.0 tolerance degree : + 4.0 RATED SPEED
cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1108 guide sleeve travel mm : 6.53 Tolerance mm : + 0.15 Rated speed rpm : 300 guide sleeve	hPa : 1700 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 101.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.00
cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (8) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1108 guide sleeve travel mm : 6.53 Tolerance mm : + 0.15 Rated speed rpm : 300 guide sleeve travel mm : 1.60	hPa : 1700 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 101.0 tolerance degree : + 4.0 RATED SPEED
cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (8) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1108 guide sleeve travel mm : 6.53 Tolerance mm : + 0.15 Rated speed rpm : 300 guide sleeve travel mm : 1.60 Tolerance mm : + 0.20	hPa : 1700 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 101.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.00 Rated speed rpm : 1100
cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (8) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1108 guide sleeve travel mm : 6.53 Tolerance mm : + 0.15 Rated speed rpm : 300 guide sleeve travel mm : 1.60 Tolerance mm : + 0.20 Rated speed rpm : 1050	hPa : 1700 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 101.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.00 Rated speed rpm : 1100
Cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (8) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1108 guide sleeve travel mm : 6.53 Tolerance mm : 4.50 guide sleeve travel mm : 300 guide sleeve travel mm : 1.60 Tolerance mm : + 0.20 Rated speed rpm : 1050 guide sleeve	hPa : 1700 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 101.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.00 Rated speed rpm : 1100 Tolerance 1/min : + 5
cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (8) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1108 guide sleeve travel mm : 6.53 Tolerance mm : + 0.15 Rated speed rpm : 300 guide sleeve travel mm : 1.60 Tolerance mm : + 0.20 Rated speed rpm : 1050	hPa : 1700 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER control lever position degree : 101.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 13.00 Rated speed rpm : 1100

Tolerance 1/min : ← 15 0.50 rack travel mm : : **←** 0.50 Tolerance mm Rated speed rpm : 1300 LOW IDLE control lever position degree : tolerance degree : + 4.0 Testing: Rated speed rpm 300 rack travel mm 5.00 Tolerance mm : + 0.102.00 rack travel mm Rated speed rpm 420 Tolerance 1/min 20 Rated speed rpm 200 CRT mm min. :> 6.50TORQUE CONTROL 1050 Rated speed rpm rack travel mm : 14.00 Tolerance mm : +- 0.05 ANEROID/ALTITUDE COMPENSATOR TEST SETTING 400 Rated speed rpm 1700 Pressure hPa 14.00 rack travel mm Tolerance mm : +- 0.05 Pressure hPa Rated speed rpm 400 rack travel mm 8.75 : : **←** 0.20 Tolerance mm MEASUREMENT Rated speed rpm : 400

570

10.50

Tolerance mm : +- 0.20 : 1100 Pressure hPa rack travel mm : 13.00 Tolerance mm : +- 0.05 Start interlock FUEL DELIVERY CHARACTERISTICS Aneroid pressure 400 Rated speed rpm : Del. quantity cm3/1000 strokes : 240.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm 8.75 : + 0.30 Tolerance mm Del. quantity cm3/1000 strokes : 135.0 Tolerance cm3/1000 strokes : \leftarrow 20.0 Check tolerance cm3/1000s. : + 24.0 LOW IDLE Rated speed rpm : 300 Del. quantity cm3/1000 strokes : 23.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance : +-6.0 cm3/1000s. Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s.12.0

End of test specification sheet

Pressure hPa

rack travel mm :

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 26.03.97 Test oil : ISO 4113

Combination No. : 0 402 648 945

Injection pump

Pump designation : PE8P120A320LS7847-3

EP type number : 0 412 628 886

Governor

Governer design. : RQ300/1050PA1030-16

Governer no. : 0 421 801 738

Cust. part No. : 0230747802

Customer-spec. information Customer : MB-NFZ

Motor : 0M402 LA Power KW : 280.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance °C 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 : +-Tolerance bar 0.1

Tolerance l/h : +- 10.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar Tolerance bar : **←** 1.5

Test lines : 1 680 750 075 Outside diameter : 8.0

x inside diameter :

x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm 5.55 Tolerance mm

: +- 0.05 Check

tolerance mm : +- 0.10

Rack travel in mm : 20.50 Tolerance mm : + 0.50

: 8-7-2-6-3 Firing order

: - 4- 1

Phasing : 0-45-90-135-180

: -270-315

Tolerance : +- 0.30

Check

tolerance *NW : +- 0.75

Start of delivery mark

Tolerance : + 0.10

Check

tolerance *NW : **←** 0.75

Barrel no. 8 :

BASIC SETTING

Rated speed rpm : 550

Rack travel in mm: 14.40

Tolerance mm : + 0.05	- guide sleeve
	- travel mm : 6.08
Del. quantity	Tolerance mm : + 0.10
cm3/1000 strokes : 226.0	}
	Rated speed rpm : 414
Tolerance -	guide sleeve
cm3/1000 strokes : +- 1.0	travel mm : 3.88
4	Tolerance mm : + 0.10
Check tolerance	
cm3/1000s. : +- 4.0	Rated speed rpm : 550
	guide sleeve
Spreed	travel mm : 6.00
	- Tolerance mm : + 0.10
Tolerance	-
cm3/1000 strokes : 6.0	Rated speed rpm : 1270
	- guide sleeve
Check tolerance	travel mm : 11.50
cm3/1000s. : 9.0	Tolerance mm : + 0.50
	Rated speed rpm : 847
	guide sleeve
Rated speed rpm : 300	travel mm : 6.23
THE COLUMN TO TH	Tolerance mm : + 0.10
Rack travel in mm: 5.50	- Oct and like
Tolerance mm : +- 0.10	
Del. quantity	GUIDE SLEEVE POSITION
cm3/1000 strokes : 13.0	L COLUMN ORGENT COULTROIT
Tolerance	
cm3/1000 strokes : + 3.0	control lever
Check tolerance	position degree : 109
cm3/1000s. : + 6.0	Rated speed rpm : 600
Spreed	L Rated Speed (pill) . 000
Tolerance	Rack travel in mm : 20.00
cm3/1000 strokes : 6.0	Tolerance mm : +- 0.80
Check tolerance	
cm3/1000s. : 10.0	
(1157 10003.	FULL LOAD DELIVERY AT FULL LOAD STOP
	L TOLL COAD DECIVERY AT TOLL COAD STOP
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 550
WITH GOVERNOR	Aneroid pressure
WITH GOVERNOR	- hPa : 1200
	Del. quantity
GUIDE SLEEVE TRAVEL	- cm3/1000 strokes : 226.0
OGAPE OFFICE UMAFF	- Tolerance
Rated speed rpm : 1104	- cm3/1000 strokes : +- 1.0
guide sleeve	- Check tolerance
travel mm : 6.65	- cm3/1000s. : +- 4.0
Tolerance mm : + 0.10	- Spreed
Total dilice iiiii	- Tolerance
Rated speed rpm : 300	- cm3/1000 strokes : 6.0
guide sleeve	Check tolerance
travel mm : 1.79	- cm3/1000s. : 9.0
Tolerance mm : + 0.10	. ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
1415.41104	
Rated speed rpm : 1050	
guide steeve	CONTROL LEVER
travel mm : 6.30	- CONTINUE ELVEN
Tolerance mm : + 0.10	- control lever
	- position degree : 99.0
Rated speed rpm : 792	tolerance degree : +- 4.0
varen sheen i hiii • 13c	total dire deglet . The 4.0

		†
RATED SPEED	47.00	ANGOAS / 41 TITLE
rack travel mm		+ ANEROID/ALTITUDE
Rated speed rpm Tolerance 1/min		+ COMPENSATOR TEST
rocerance (/min)	; — 0	I
rack travel mm	: 4.00	+ SETTING
Rated speed rpm		+
Tolerance 1/min		Rated speed rpm : 400
		Pressure hPa : 1200
rack travel mm	: 0.70	† rack travel mm : 14.40
Tolerance mm	: ← 0.70	+ Tolerance mm : + 0.05
Rated speed rpm	: 1300	1
		+ Pressure hPa : - + Rated speed rpm : 400
		+ Rated speed rpm : 400 + rack travel mm : 10.40
		Tolerance mm : + 0.15
LOW IDLE		Total allocations
		+ MEASUREMENT
		+
control lever	70.0	+ Rated speed rpm : 400
position degree		150
tolerance degree	: +- 4.0	+ Pressure hPa : 450
Testing:		+ rack travel mm : 12.90 + Tolerance mm : +- 0.20
resting.		T Toterance min : += 0.20
Rated speed rpm	: 300	Pressure hPa : 300
rack travel mm		+ rack travel mm : 11.90
Tolerance mm	: ← 0.10	Tolerance mm : + 0.20
	2.00	† <u></u>
rack travel mm	: 2.00	† Start interlock
Rated speed rpm Tolerance 1/min		T Poted around num . \ 100
Toterance Trinin	20	+ Rated speed rpm : > 100 + Rated speed rpm : > 220
Rated speed rpm	: 200	Traced speed (pii) . > 220
		+ Check
CRT mm main.	: > 7.10	+ speed 1/min :> 80
		+ Check
TODOUE CONTROL		+ speed 1/min : > 240
TORQUE CONTROL		Ţ
Rated speed rpm	: 550	FUEL DELIVERY CHARACTERISTICS
rack travel mm	: 14.40	+
Tolerance mm	: ← 0.05	+ Aneroid pressure
	4400	+ hPa : 1200
Rated speed rpm	: 1050	+ Rated speed rpm : 1050
rack travel mm	: 14.05	+ Del. quantity
Tolerance mm	: +- 0.10	+ cm3/1000 strokes : 212.0 + Tolerance
Rated speed rpm	: 950	cm3/1000 strokes : +- 2.0
rack travel mm	: 14.20	Check tolerance
Tolerance mm	: + 0.10	+ cm3/1000s. : + 5.0
		Spreed
Rated speed rpm	: 800	+ Tolerance
rack travel mm	: 14.40	+ cm3/1000 strokes : 8.0
Tolerance mm	: ← 0.05	+ Check tolerance
Rated speed rpm	: 400	+ cm3/1000s. : 12.0
rack travel mm		Aneroid pressure
Tolerance mm	: +- 0.20	+ hPa : 450
	- 	

Rated speed rpm	: 400
Del. quantity cm3/1000 strokes	: 166.0
Cm5/1000 strokes Tolerance	: 100.0
cm3/1000 strokes	: ← 1.5
Check tolerance	
cm3/1000s.	: +- 4.5
Aneroid pressure	
nPa	-
Rated speed rpm	: 400
Del. quantity cm3/1000 strokes	: 107.0
Tolerance	
cm3/1000 strokes	: + 1.0
Check tolerance of the construction of the con	: +- 4.0
Spreed	
Tolerance	. 0.0
cm3/1000 strokes Check tolerance	: 8.0
cm3/1000s.	: 12.0
STARTING FUEL DEL	IVERY
Rated speed rpm	: 100
Del. quantity cm3/1000 strokes	: 200.0
Tolerance	_
cm3/1000 strokes Check tolerance	: ← 10.0
cm3/1000s.	: + 14.0
OW IDLE	
	: 300
Del. quantity	. 550
cm3/1000 strokes	: 13.0
Tolerance cm3/1000 strokes	: +- 3.0
Check tolerance	• 5.0
m3/1000s.	: ← 6.0
Spreed	
folerance cm3/1000 strokes	: 6.0
Check tolerance	
cm3/1000s.	: 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 25.03.97 Edition : 25.05.97 : ISO 4113 Test oi'.

Combination No. : 0 402 670 810

Injection pump

Pump designation : PE12P12OA52O/5RS7375

EP type number : 0 412 620 844

Governor

Governer design. : RSUV300...900P0A361

Governer no. : 0 421 829 110

Cust. part No. : 1 2277 426

Customer-spec. information

Customer : MWM

Motor : TBD 616-V12 Power KW : 648.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2/3.1

Test oil inlet

temp. °C Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : +- 0.1

Overflow quantity

min. L/h : 120 Tolerance L/h : +- 20.0

Test nozzle holde

: 1 688 901 019 assembly

Opening pressure

: 208.5 bar bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter :

x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.60 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 13.00 Tolerance mm : \leftarrow 0.50

Firing order : 1-2-9-10-5-6

: 11-12-3-4-7

: 8

Phasing : 0-30-60-90-120-150

: 180-210-240-270-300

: 330

: +- 0.30 Tolerance

Check

tolerance *NW : + 0.50

Start of delivery mark

Tolerance : \leftarrow 0.30

Check

tolerance *NW : **←** 0.50

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm Tolerance mm	: 13.30 : + 0.05	FULL LOAD DELIVER	Y AT FULL LOAD STOP
Del. quantity cm3/1000 strokes	: 325.0	Aneroid pressure hPa Del. quantity	: -
Tolerance cm3/1000 strokes	: + 1.0	cm3/1000 strokes Tolerance cm3/1000 strokes	
Check tolerance cm3/1000S.	: + 4.0	Check tolerance cm3/1000s. Spreed	: +- 4.0
Spreed	+	Tolerance	
Tolerance cm3/1000 strokes	: 6.0	cm3/1000 strokes Check tolerance cm3/1000s.	: 6.0 : 9.0
Check tolerance cm3/1000s.	9.6		
	<u> </u>	CONTROL LEVER	
Rated speed rpm	: 325	control lever position degree tolerance degree	
Rack travel in mm	: 4.90	toterance degree	: 4.0
Tolerance mm	: + 0.10	RATED SPEED	
Del. quantity cm3/1000 strokes	: 30.0	rack travel mm	: 1.00
Tolerance	+	Tolerance mm	: +- 0.70
cm3/1000 strokes Check tolerance	: + 3.0	Rated speed rpm	: 950
cm3/1000s.	: + 6.0	ASSEMBLY GOVERNOR	SETTING
Spreed Tolerance	1	Rated speed rpm	: 750
cm3/1000 strokes	: 8.0	rack travel mm	
Check tolerance cm3/1000s.	: 12.0	Rated speed rpm	: 784
tilis/ 10005.	12.0	Tolerance 1/min	: +- 4
(D) CETTING OF TH	IESTION DUMP	rack travel mm	: 4.00
(B) SETTING OF IN- WITH GOVERNOR	JECTION PUMP	rack travel mm	: 1.00
	†	rack travel mm Tolerance mm	: +- 0.70
	I		
GUIDE SLEEVE POSI	TION	Rated speed rpm rack travel mm	: 751 : 12.30
control lever	1	Rated speed rpm	: 785
position degree	: - 3	Tolerance 1/min	: + 4
Rated speed rpm	: 800 +	rack travel mm	: 4.00
Rack travel in mm Tolerance mm	: 0.50	rack travel mm Tolerance mm	: 1.00
IOCETANCE IMA	. — 0.20	TOTETATION MILE	. +- 0.70
governor spring	+	Datad annual	. 750
pre-tension click setting x	: 3.25	Rated speed rpm rack travel mm	: 724 : 12.30
	+		.2,32

Rated speed rpm Tolerance 1/min rack travel mm	786 4.00 1.00	†
Tolerance mm	: ← 0.70	†
Rated speed rpm rack travel mm	: 753 : 12.30	†
Rated speed rpm Tolerance 1/min rack travel mm	: 787 : +- 4 : 4.00	†
rack travel mm Tolerance mm	: 1.00 : + 0.70	+ + + + + + + + + + + + + + + + + + + +
Rated speed rpm rack travel mm	: 754 : 12.30	‡
Rated speed rpm Tolerance 1/min rack travel mm	: 4.00	‡
rack travel mm Tolerance mm	: 1.00 : +- 0.70	†
Rated speed rpm rack travel mm	: 755 : 12.30	†
Rated speed rpm Tolerance 1/min rack travel mm	: 789 : +- 4 : 4.00	+ + +
rack travel mm Tolerance mm	: 1.00 : + 0.70	+
LOW IDLE		Ī
control lever position degree tolerance degree	: 78.0 : +- 4.0	† †
Setting point w/o	out bumper spring	Ī
Rated speed rpm rack travel mm Tolerance mm	: 325 : 4.40 : + 0.10	+++++++++++++++++++++++++++++++++++++++
Testing:		‡
Rated speed rpm rack travel mm Tolerance mm	: 325 : 4.90 : +- 0.10	+

rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 360 : + 30
TORQUE CONTROL	
Rated speed rpm rack travel mm Tolerance mm	: 700 : 13.30 : + 0.05
Start interlock	
STARTING FUEL DEL	IVERY
Rated speed rpm	: 100
Del. quantity cm3/1000 strokes	: 350.0
Tolerance cm3/1000 strokes	: +- 20.0
Check tolerance cm3/1000s.	: +- 24.0
LOW IDLE	
Rated speed rpm	: 325
Del. quantity cm3/1000 strokes	: 30.0
Tolerance cm3/1000 strokes	: +- 3.0
Check tolerance cm3/1000s. Spreed	: +- 6.0
Tolerance cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	: 12.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 20.03.97 Test oil : ISO 4113

combination No. : 0 402 746 986

Injection pump

Pump designation : PES6P120A720RS7224

EP type number : 0 412 726 893

Governor

Governer design. : RQ275/1050PA1021-3

Governer no. : 0 421 801 677

Cust. part No.

Customer-spec. information

Customer : IVECO-UNIC Motor : 8460.41.731

. 6400.41.73

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5
Tolerance bar : + 0.1

rocciance bar .

Overflow quantity
min. L/h : 140

min. l/h : 140 Tolerance l/h : + 20.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.15
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Tolerance $: \leftarrow 0.30$

Check

tolerance *NW : + 0.50

Start of delivery mark

Check

tolerance °NW : + 0.40

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 12.65 Tolerance mm : + 0.05

oterance mm : + 0.05

Del. quantity cm3/1000 strokes : 221.0	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Tolerance cm3/1000 strokes : + 1.0	cm3/1000s. : +- 4.0 Spreed Tolerance
Check tolerance cm3/1000s. : + 4.0	cm3/1000 strokes : 5.0 Check tolerance
Spreed	cm3/1000s. : 9.0
Tolerance cm3/1000 strokes : 5.0	RATED SPEED rack travel mm : 11.60 Rated speed rpm : 1103
Check tolerance cm3/1000s. : 9.0	Tolerance 1/min : +- 8
 ‡	rack travel mm : 4.00 Rated speed rpm : 1175 Tolerance 1/min : +- 15
Rated speed rpm : 275	rack travel mm : 0.50
Rack travel in mm: 5.00 Tolerance mm: + 0.10	Tolerance mm : + 0.50 Rated speed rpm : 1350
Del. quantity cm3/1000 strokes : 23.0 + Tolerance	
cm3/1000 strokes : +- 3.0 +- Check tolerance +-	LOW IDLE
cm3/1000s. : +- 6.0	FOM INTE
Tolerence + cm3/1000 strokes : 8.0 + Check tolerance + cm3/1000 strokes : 8.0 + cm3/1000 strokes	control lever position degree : 74.0 tolerance degree : +- 4.0
cm3/1000s. : 12.0	Testing:
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 275 rack travel mm : 5.00 Tolerance mm : + 0.10
GUIDE SLEEVE POSITION	rack travel mm : 2.00 Rated speed rpm : 355 Tolerance 1/min : + 20
control lever position degree : 109	Rated speed rpm : 100
Rated speed rpm : 600	CRT mm min. : > 6.50
Rack travel in mm: 20.00 Tolerance mm: + 0.80	TORQUE CONTROL
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 1050 rack travel mm : 12.65 Tolerance mm : +- 0.05
Rated speed rpm : 1050 Aneroid pressure	Rated speed rpm : 600
hPa : 1200 Del. quantity cm3/1000 strokes : 221.0	rack travel mm : 12.70 Tolerance mm : +- 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1200
rack travel mm : 12.65
Tolerance mm : + 0.05

Pressure hPa : Rated speed rpm : 500
rack travel mm : 7.70
Tolerance mm : +- 0.20

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 290
rack travel mm : 8.90
Tolerance mm : + 0.20

Pressure hPa : 580 rack travel mm : 11.35 Tolerance mm : + 0.05

Start interlock

Rated speed rpm : > 100
Rated speed rpm : < 195

Check

speed 1/min : > 80
Check

speed 1/min : < 215

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPe : 1200 Rated speed rpm : 600

Del. quantity

cm3/1000 strokes : 261.0

Tolerance

cm3/1000 strokes : +- 4.0

Check tolerance

cm3/1000s. : +- 7.0

Aneroid pressure

hPa : Rated speed rpm : 600

Del. quantity

cm3/1000 strokes : 130.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 135.0

Tolerance

cm3/1000 strokes : + 15.0

Check tolerance

cm3/1000s. : +- 19.0

LOW IDLE

Rated speed rpm : 275
Del. quantity

cm3/1000 strokes : 23.0

Tolerance

cm3/1000 strokes : + 3.0

Check tolerance

cm3/1000s. : +- 6.0

Spreed Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 26.03.97

Test oil

: ISO 4113

Combination No. : 0 402 746 992

Injection pures

Pump designation : PES6P120A720RS7340

EP type number : 0 412 726 912

Governor

Governer design. : RQ300...1100PA1156

Governer no. : 0 421 801 726

Cust. part No. :

Customer-spec. information

Customer : RABA

Motor

: TLL235

Power KW

: 235.0

TEST BENCH REQUIREMENTS

Inlet line

: 4.2

Test oil inlet

temp. °C

40

Tolerance °C

2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

bar

208.5

Tolerance bar

: **←** 1.5

Test lines

: 1 680 750 089

Outside diameter :

8.0

x inside diameter :

3.0

x length mm

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : +- 1.0

Prestroke mm 5.50

Tolerance mm : +- 0.05

Check

tolerance mm : + - 0.10

Rack travel in mm: 15.00

Tolerance mm : **←** 0.50

Firing order : 1-5-3-6-2-

Phasina : 0-60-120-180-240

Tolerance : +- 0.30

Check

tolerance *NW : +- 0.50

Start of delivery mark

Tolerance : +- 0.50

Check

tolerance *NW

: +- 0.75

Barrel no.

: 1

BASIC SETTING

Rated speed rpm : 300

Rack travel in mm :

Tolerance mm : +-

5.90

0.10

Del. quantity

cm3/1000 strokes :

22.0

- 1		•	
Tolerance	7.0	†	
cm3/1000 strokes Check tolerance	: 3.0	CONTROL LEVED	
cm3/1000s.	: +- 6.0	CONTROL LEVER	
Spreed	0.0	T control lever	
Tolerance		+ position degree	: 35.0
cm3/1000 strokes	: 8.0	+ tolerance degree	
Check tolerance			
cm3/1000s.	: 12.0	+ control lever	
		+ position degree	: 96.0
		+ tolerance degree	: +- 4.0
(B) SETTING OF IN	JECTION PUMP	+	
WITH GOVERNOR		+ RATED SPEED	40.50
		+ rack travel mm	
CUIDE OF FEVE TOWN		Rated speed rpm	
GUIDE SLEEVE TRAVE		† Tolerance 1/min	: +- 5
Rated speed rpm	: 1159	T rack travel mm	: 4.00
guide sleeve	. 1137	+ Rated speed rpm	
travel mm	: 6.37	+ Tolerance 1/min	
Tolerance mm	: + 0.10	+	
	-	+ rack travel mm	: 0.50
Rated speed rpm	: 300	+ Tolerance mm	: +- 0.50
guide sleeve		+ Rated speed rpm	: 1400
travel mm	: 2.30	+	
Tolerance min	: +- 0.10	Ť	
Makedd	4400	†	
Rated speed rpm	: 1100	I OU TOUT	
guide sleeve travel mm	: 6.00	+ LOW IDLE	
Tolerance mm	: +- 0.10	I	
TOTAL OR ICE TIME	5.16	- control lever	
Rated speed rpm	: 384	+ position degree	: 75.0
guide sleeve		+ tolerance degree	
travel mm	: 4.57	+	
Tolerance mm	: ← 0.10	+ control lever	
		+ position degree	
Rated speed rpm	: 470	+ tolerance degree	: +- 4.0
guide sleeve	4 00	†	
travel mm	: 6.00	+ Testing:	
Tolerance mm	: ← 0.10	T Poted amond men	• 300
Rated speed rpm	: 1360	Rated speed rpm	: 300 : 5.90
مريم أم ما معرب		+ rack travel mm + Tolerance mm	: + 0.10
travel mm	: 11.50	+	
Tolerance mm	: +- 0.50	+ rack travel mm	: 2.00
		+ Rated speed rpm	: 385
		+ Tolerance 1/min	: +- 20
GUIDE SLEEVE POSIT	TION	+	
		+ Rated speed rpm	: 200
and I laws		†	. > 0 (0
control lever	: 109	CRT mm min.	: > 8.60
position degree Rated speed rpm		I	
nated speed (pin	.)00	TORQUE CONTROL	
Rack travel in mm	: 20.00	+ Chaoe continue	
Tolerance mm		Rated speed rpm	: 1100
	-	+ rack travel mm	
		+ Tolerance mm	: + 0. <u>0</u> 5
		+	

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm 500 Pressure hPa 900 13.50 rack travel mm : Tolerance mm : +- 0.05

Pressure hPa 500 Rated speed rom rack travel mm 11.05 Tolerance mm : + 0.20

MEASUREMENT

500 Rated speed rpm

Pressure hPa 210 rack travel mm 11.70 : +- 0.20 Tolerance mm

Pressure hPa 400 : rack travel mm 12.90 Tolerance mm : + 0.05

Start interlock

Rated speed rpm 100 : < Rated speed rpm : > 220

Check

speed 1/min : < 80

Check

speed 1/min : > 240

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 1100 Rated speed rpm

Del. quantity

cm3/1000 strokes : 201.5

Tolerance

cm3/1000 strokes 3.0

Check tolerance

cm3/1000s.6.0

Aneroid pressure

hPa 500

Rated speed rpm

Del. quantity

cm3/1000 strokes : 128.0

Tolerance

cm3/1000 strokes : +-2.0 Check tolerance

: +- 4.0 cm3/1000s.

STARTING FUEL DELIVERY

Rated speed rpm 100

Del. quantity

cm3/1000 strokes : 205.0

Tolerance

cm3/1000 strokes : \leftarrow 20.0

Check tolerance

cm3/1000S.: +- 24.0

LOW IDLE

Rated speed rpm 300

Del. quantity

cm3/1000 strokes : 22.0

Tolerance

cm3/1000 strokes 3.0

Check tolerance

cm3/1000s. 6.0 : +-

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s.12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 21.03.97 Test oil : ISO 4113

Combination No. : 0 403 466 179

Injection pump

Pump designation : PES6MW100/720/3RS120

: 5-1

EP type number : 0 413 406 245

Covernor

Governer design. : RSV675...1250MW0A403

Governer no. : 0 420 085 296

Cust. part No. : 0280742102

Customer-spec. information

Customer : MB-NFZ Motor : OM 366 LA

Power KW : 174.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

208.5 bar

Tolerance bar : **←** 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0 x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : + 1.0

Prestroke mm 3.25 Tolerance mm : + 0.05

Check

: + 0.10 tolerance mm

Rack travel in mm: 10.50

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

Tolerance : + 0.50

Check

tolerance 'NW : + 0.75

BASIC SETTING

Rated speed rpm : 1230

Rack travel in mm: 13.70 : +- 0.05 Tolerance mm

Del. quantity

cm3/1000 strokes : 106.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s. : +-3.0

Spreed

Tolerance cm3/1000 strokes : 3.5	Check tolerance cm3/1000s. : 6.0
Check tolerance + cm3/1000s. : 6.0 +	!
	CONTROL LEVER
Rated speed rpm : 675	control lever position degree : 92.0 tolerance degree : +- 4.0
Rack travel in mm: 5.50 + Tolerance mm: + 0.30 +	RATED SPEED
Del. quantity	RATED SPEED
cm3/1000 strokes : 12.0 + Tolerance +	rack travel mm : 1.00 Tolerance mm : + 0.70
cm3/1000 strokes : +- 2.0 +- Check tolerance +-	Rated speed rpm : 1400
cm3/1000s. : +- 4.5	rack travel mm : 4.00
Spreed Tolerance	Rated speed rpm : 1305
cm3/1000 strokes : 3.5 Check tolerance	ASSEMBLY GOVERNOR SETTING
cm3/1000s. : 5.5	Rated speed rpm : 1270
1	Rated speed rpm : 1270 rack travel mm : 12.70
(8) SETTING OF INJECTION PUMP	Rated speed rpm : 1299
WITH GOVERNOR +	Tolerance 1/min : + 4
‡	rack travel mm : 4.00
GUIDE SLEEVE POSITION +	Rated speed rpm : 1271
+	rack travel mm : 12.70
control lever	Rated speed rpm : 1300
position degree : -3	Tolerance 1/min : + 4
Rated speed rpm : 800	rack travel mm : 4.00
Rack travel in mm: 0.65	Dahad aread ros . 1272
Tolerance mm : \leftarrow 0.35	Rated speed rpm : 1272 rack travel mm : 12.70
governor spring	
pre-tension +	Rated speed rpm : 1301
click setting x : 1.25	Tolerance 1/min : +- 4 rack travel mm : 4.00
	rack travet man . 4.00
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated sneed rnm · 1273
Rated speed rpm : 1230 +	Rated speed rpm : 1273 rack travel mm : 12.70
Aneroid pressure +	
hPa : - †	Rated speed rpm : 1302 Tolerance 1/min : + 4
Del. quantity + cm3/1000 strokes : 106.0 +	rack travel mm : 4.00
Tolerance + 10	
cm3/1000 strokes : + 1.0 + Check tolerance	Rated speed rom : 1278
cm3/1000s. : +- 3.0	Rated speed rpm : 1278 rack travel mm : 12.70
Spreed +	
T-1	
Tolerance + cm3/1000 strokes : 3.5 +	Rated speed rpm : 1307 Tolerance 1/min : +- 4

1279 Rated speed rpm rack travel mm 12.70 Rated speed rpm 1308 Tolerance 1/min rack travel mm 4.00 LOW IDLE control lever position degree 73.Ü tolerance degree : +-4.0 Testing: Rated speed rom 675 : rack travel mm 5.50 Tolerance mm : + 0.30 2.00 rack travel mm Rated speed rpm 690 Tolerance 1/min 30 Rated speed rpm 100 CRT man min. : > 19.00 TORQUE CONTROL Rated speed rpm 1230 rack travel mm 13.70 Tolerance mm : +- 0.05 800 Rated speed rom rack travel mm 13.70 Tolerance mm : + 0.10Start interlock FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa Rated speed rpm 800 Del. quantity cm3/1000 strokes : 104.0 Tolerance cm3/1000 strokes : +-1.5 Check tolerance cm3/1000s. 4.0 Spreed

Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. 7.0 STARTING FUEL DELIVERY Rated speed rpm : 100 Del. quantity cm3/1000 strokes : 115.0 Tolerance cm3/1000 strokes : +-5.0 Check tolerance cm3/1000s. : +-8.0 LOW IDLE Rated speed rpm 675 Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s.4.5

End of test specification sheet

3.5

5.5

cm3/1000 strokes :

Check tolerance cm3/1000s.

Spreed Tolerance

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 11.06.96 : ISO 4113 Test oil

Combination No. : 0 402 046 867

Injection pump

Fumo designation : PES6P120A720RS3345 EP type number : 0 412 026 779

Governor

Governer design. : RQ300/1025PA1214 Governer no. : 0 421 801 784

Cust. part No. :

Customer-spec. information Customer : IVECO-FIAT

Motor : 8360.46.4669

Power KW : 196.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

lest oil inlet

temp. "C 40 Tolerance °C : +-2.0

Overflow valve : 2 417 413 034

Inlet press. bar : 2.5

Overflow quantity min. L/h : 175
Tolerance L/h : + 10.0

Fest nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 2.5

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 3.55 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 : +- 0.30 Phasing

Tolerance

Check

tolerance $^{\circ}NW$: \leftarrow 0.50

BASIC SETTING

Rated speed rpm : 1025

Rack travel in mm: 12.85

Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 194.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance cm3/1000s. : + 4.0	Check tolerance : 9.0
Spreed	•
Tolerance cm3/1000 strokes : 5.0	- RATED SPEED - rack travel mm : 11.85 - Rated speed rpm : 1085 - Tolerance 1/min : +- 8
Check tolerance cm3/1000S. 9.0	- Check - speed 1/min : + 13
Rated speed rpm : 300	rack travel mm : 4.00 Rated speed rpm : 1160 Tolerance 1/min : +- 15
Rack travel in mm : 5.00	- Check - speed 1/min : +- 20
Del. quantity cm3/1000 strokes : 22.0 Tolerance	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1250
cm3/1000 strokes : + 3.0 Check tolerance cm3/1000S. : + 6.0 Spreed	rack travel mm : 4.00
Tolerance sm3/1000 strokes : 8.0	100 70 5
Check tolerance : 12.0	- LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 74.0 tolerance degree : +- 4.0 Testing:
GUIDE SLEEVE POSITION	Rated speed rpm : 300 rack travel mm : 5.00
control lever position degree : 97 Rated speed rpm : 550	Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 360 Tolerance 1/min : + 20
Rack travel in mm : 14.30 Tolerance mm : ⊹- 0.80	Rated speed rpm : 200
FULL LOAD DELIVERY AT FULL LOAD STOP	- CRT mm min. : > 5.70
Rated speed rpm : 1025	TORQUE CONTROL
Aneroid pressure hPa : 1200 Del. quantity	Rated speed rpm : 1025 rack travel mm : 12.85
cm3/1000 strokes : 194.0 + Tolerance cm3/1000 strokes : + 1.0 + Tolerance cm3/1000 st	Tolerance mm : +- 0.05 Rated speed rpm : 500
Check tolerance cm3/1000s. : +- 4.0 Spreed	Rated speed rpm : 500 rack travel mm : 12.90 Tolerance mm : +- 0.10
Tolerance cm3/1000 strokes : 5.0	

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm	:	500
Pressure hPa	:	1200
rack travel mm	:	12.85
Tolerance mm	:	 0.0 5

Pressure hPa	:	-
Rated speed rpm	:	500
rack travel mm	:	9.00
Tolerance ma	: +	- 0.15

MEASUREMENT

Rated	speed	rpm	:	500
-------	-------	-----	---	-----

Pressure hPa	:	600
rack travel mm	:	11.70
Tolerance mm	: +	- 0.20

Pressure hPa	:	450
rack travel min	:	10.90
Tolerance mm	: +	- 0.05

Start interlock

FUEL DELIVERY CHARACTERISTICS

Aneroi	d pre	ssure
--------	-------	-------

hPa	:	1200
Rated speed rpm	:	500
Del. quantity		
- 14555		

cm3/1000 strokes : 198.0

Tolerance

cm3/1000 strckes : \leftarrow 3.0

Check tolerance

cm3/1000s. : +- 6.0

Aneroid pressure

hPa	:	-
Rated speed rpm	:	500
Del. quantity		
cm3/1000 strokes	:	86.0
Tolerance		

cm3/1000 strokes : \leftarrow 1.0

Check tolerance cm3/1000s. : +- 4.0

SCORTING FUEL DELIVERY

Rated speed rpm	:	100
rack travel mm	:	9.00
Tolerance mm	: +-	0.20
Del. quantity		
cm3/1000 strokes	:	90.0
Tolerance		
cm3/1000 strokes	: +-	15.0
Check tolerance		
cm3/1000s.	• +-	19 0

LOW IDLE

LOW TOLL	
Rated speed rpm Del. quantity	: 300
cm3/1000 strokes Tolerance	: 22.0
cm3/1000 strokes Check tolerance	: - 3.0
cm3/1000s. Spreed	: +- 6.0
Tolerance	
cm3/1000 strokes Check tolerance	: 8.0
cm3/1000s.	: 12.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 02.04.97 Test oil : ISO 4113

Combination No. : 0 402 746 647

Injection pump

Pump designation : PES6P120A720RS7366 EP type number : 0 412 726 932

Governor

Governer design. : RQV275...1100PA1208K

Governer no. : 0 421 815 459

Cust. part No.

Customer-spec. information

Customer : IVECO-FRANCE Motor : 8460.41.4000

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : ← 2.0

Overflow valve : 2 417 413 076

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 20.50

Tolerance mm : → 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Tolerance : + 0.30

Check

tolerance $^{\circ}NW$: \leftarrow 0.50

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 12.75
Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 284.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : \leftarrow 4.0

Spreed

Tolerance +	Aneroid pressure
cm3/1000 strokes : 5.0	hPa : 1200
Check tolerance	Del. quantity cm3/1 00 0 strokes : 284.0
cm3/1000s. : 9.0	Tolerance
	cm3/1000 strokes : +- 1.0 Check tolerance
+	cm3/1000s. : + 4.0
Rated speed rpm : 275	Spreed Tolerance
Rack travel in mm: 6.70	cm3/1000 strokes : 5.0
Tolerance mm : + 0.10 + Del. quantity	Check tolerance cm3/1000s. : 9.0
cm3/1000 strokes : 23.0	tilis/10005. ; 7.0
Tolerance 7/4000	
cm3/1000 strokes : + 3.0 + Check tolerance	CONTROL LEVER
$cm3/1000s.$: \leftarrow 6.0	
Spreed + Tolerance +	control lever position degree : 117.0
cm3/1000 strokes : 8.0	tolerance degree : + 4.0
Check tolerance + 12.0 + 12.0	DATED COFFE
tms/10005. : 12.0 +	RATED SPEED rack travel mm : 11.70
+	Rated speed rpm : 1145
(B) SETTING OF INJECTION PUMP + WITH GOVERNOR +	Tolerance 1/min : +- 5 Check
+	speed 1/min : + 10
GUIDE SLEEVE TRAVEL	rack travel mm : 4.00
\	Rated speed rpm : 1260
Rated speed rpm : 1155 + guide sleeve +	Tolerance 1/min : +- 15 Check
travel mm : 9.75	speed 1/min : +- 20
Tolerance mm : + 0.15	modulational are a 0.50
Rated speed rpm : 275	rack travel mm : 0.50 Tolerance mm : +- 0.50
guide steeve	Rated speed rpm : 1350
travel mm ; 1.70 + Tolerance mm : + 0.20 +	
+	
Rated speed rpm : 790 + guide sleeve +	LOW IDLE
travel mm : 6.42	LOW IPEE
Tolerance mm : + 0.25	control lever
Rated speed rpm : 460	position degree : 76.0
guide sleeve	tolerance degree : +- 4.0
travel mm : 3.77 + Tolerance mm : + 0.25 +	Testing:
1442	•
Rated speed rpm : 1440 + guide sleeve +	Rated speed rpm : 275 rack travel mm : 6.70
travel mm : 13.50 +	Tolerance mm : + 0.10
Tolerance mm : + 0.50	Rated speed rpm : 100
FULL LOAD DELIVERY AT FULL LOAD STOP	CRT mm min. : > 8.20
Rated speed rpm : 1100 +	Rated speed rpm : 335

		+ Rated speed rpm	: 650
TORQUE CONTROL		Del. quantity cm3/1000 strokes	: 287.0
Rated speed rpm	: 1100_	+ Tolerance + cm3/1000 strokes	: +- 3.0
rack travel mm Tolerance mm	: 12.75 : + 0.05	+ Check tolerance + cm3/1000s.	: +- 6.0
Rated speed rpm		Aneroid pressure	
rack travel mm		+ hPa	: 1200
Tolerance mm		Rated speed rpm Del. quantity	: 800
Rated speed rpm rack travel mm		cm3/1000 strokes Tolerance	: 300.0
Tolerance mm	: + 0.20	+ cm3/1000 strokes	· +- 3 N
	. 3169	+ Check tolerance	
ANEDOTO /AL TYTUS		- cm3/1000s.	: ← 6.0
ANEROID/ALTITUDE COMPENSATOR TEST		+ Aneroid pressure	
CONTRACTOR IEST		hPa	• -
		Rated speed rpm	· : 650
SETTING		Del. quantity	
		+ cm3/1000 strokes	: 151.0
Rated speed rpm		+ Tolerance	
Pressure hPa	: 1200	+ cm3/1000 strokes	
rack travel mm	: 13.50	+ Check tolerance	
Tolerance mm	: + 0.10	cm3/1000s.	: +- 4.0
Pressure hPa	: -	+	
Rated speed rpm	: 800	+	
rack travel mm	: 9.40	STARTING FUEL DEL	.IVERY
Tolerance mm	: +- 0.10	+	
		+ Rated speed rpm	
MEASUREMENT		+ rack travel mm	
Dakad amend ame	. 900	+ Tolerance mm	: +- 0.30
Rated speed rpm	: 800	Del. quantity	. 445.0
Proceine hon	: 290	+ cm3/1000 strokes + Tolerance	: 115.0
Pressure hPa rack travel mm		+ cm3/1000 strokes	· +- 15 N
Tolerance mm	<u> </u>	+ Check tolerance	. , 17.0
TOTAL WITH HER		- cm3/1000s.	: +- 19.0
Pressure hPa	: 520	+	
rack travel mm	: 12.50	+	
Tolerance mm	: - 0.05	+	
Start interlock		LOW IDLE	
Dated speed and	. > 170	Poted speed as-	. 275
Rated speed rpm Rated speed rpm		Rated speed rpm Del. quantity	: 215
varen sheen thui	. > 220	+ cm3/1000 strokes	: 23.0
Check		+ Tolerance	. 63.0
speed 1/min	: > 150	cm3/1000 strokes	: ← 3.0
Check		+ Check tolerance	• •••
	_	+ cm3/1000s.	: +- 6.0
speed 1/min	: < 240		• • • • • • • • • • • • • • • • • • • •
speed 1/min	: < 240	Spreed	0.0
		- + Tolerance	
speed 1/min FUEL DELIVERY CHAP		Tolerance cm3/1000 strokes	
FUEL DELIVERY CHAP		Tolerance cm3/1000 strokes check tolerance	: 8.0
		Tolerance cm3/1000 strokes	: 8.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 27.03.97 Test oil : ISO 4113

Combination No. : 0 402 746 984

Injection pump

Pump designation : PES6P120A320RS7324 EP type number : 0 412 726 905

Governor

Governer design. : RQV300...1200PA1131

Governer no. : 0 421 814 088

Cust. part No. : 51.11103-7330

Customer—spec. information

Customer : MAN

Motor : D0826LF11/LFL03

Power KW : 162.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 175
Tolerance l/h : ← 10.0

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 5.15 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 12.09
Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

. 4

Phasing : 0-60-120-180-240

Tolerance : + 0.30

Check

tolerance *NW : + 0.50

Start of delivery blocking

Tolerance : +- 0.10

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1200

Rack travel in mm : 12.45
Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 190.0	Tolerance mm : + 0.25 Rated speed rpm : 397
Tolerance cm3/1000 strokes : +- 1.0	guide sleeve travel mm : 3.01
Check tolerance	Tolerance mm : +- 0.25
cm3/1000s. : +- 4.0	Rated speed rpm : 440 guide sleeve
Spreed	travel mm : 3.37 Tolerance mm : + 0.25
Tolerance cm3/1000 strokes : 8.0	Rated speed rpm : 1470 guide sleeve
Check tolerance cm3/1000s. : 12.0	travel mm : 13.50 Tolerance mm : +- 0.50
Rated speed rpm : 300	GUIDE SLEEVE POSITION
Rack travel in mm: 5.40 Tolerance mm: + 0.10 Del. quantity	control Lever position degree : - 1 Rated speed rpm : 1320
cm3/1000 strokes : 29.0	Rack travel in mm : 11.45
cm3/1000 strokes : + 3.0 + Check tolerance +	Tolerance mm : 1.30
cm3/1000s. : +- 6.0 +- Spreed +- Tolerance +-	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : 8.0	Rated speed rpm : 1200 Aneroid pressure
cm3/1000s. : 12.0	hPa : 1500 Del. quantity
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	cm3/1000 strokes : 190.0 Tolerance cm3/1000 strokes : ← 1.0 Check tolerance
GUIDE SLEEVE TRAVEL	cm3/1000s. : +- 4.0 Spreed Tolerance
Rated speed rpm : 1263 guide sleeve	cm3/1000 strokes : 8.0 Check tolerance
travel mm : 10.49 Tolerance mm : + 0.25	cm3/1000s. : 12.0
Rated speed rpm : 300 puide sleeve	CONTROL LEVER
travel mm : 1.69 + Tolerance mm : + 0.25 +	control lever
Ratted speed rpm : 806 + guide sleeve	position degree : 123.0 tolerance degree : +- 4.0
travel mm : 5.85	RATED SPEED
Tolerance mm : + 0.25	rack travel mm : 11.45 Rated speed rpm : 1245
Rated speed rpm : 347 guide sleeve	Tolerance 1/min : + 5
travel mm : 2.36 +	rack travel mm : 4.00

Rated speed rpm Tolerance 1/min		MEASUREMENT
rack travel mm Tolerance mm		Rated speed rpm : 500
Rated speed rpm		Pressure hPa : 140 rack travel mm : 8.95 Tolerance mm : +- 0.05
LOW IDLE		Pressure hPa : 700 rack travel mm : 11.85 Tolerance mm : +- 0.15
control lever position degree		Start interlock
tolerance degree Testing:	: + 4.0	Rated speed rpm :> 100 Rated speed rpm :< 240
Rated speed rom	: 300	Check speed 1/min : > 80
rack travel mm Tolerance mm		Check speed 1/min : < 260
Rated speed rpm	+	FUEL DELIVERY CHARACTERISTICS
CRT mm min.	+	Aneroid pressure
Rated speed rpm	: 360	hPa : 1500 Rated speed rpm : 1000 Del. quantity
TORQUE CONTROL	‡	cm3/1000 strokes : 189.0 Tolerance
Rated speed rpm rack travel mm	: 12.45	cm3/1000 strokes : +- 3.0 Check tolerance
Tolerance mm	+	cm3/1000s. : +- 6.0
Rated speed rpm rack travel ma	12 45	Aneroid pressure hPa : 1500
Tolerance mm	: ← 0.10	Rated speed rpm : 750 Del. quantity
Rated speed rpm rack travel mm	: 750 + : 12.45 +	cm3/1000 strokes : 199.0 Tolerance
Tolerance mm	: ← 0.10	cm3/1000 strokes : +- 3.0 Check tolerance
ANEROID/ALTITUDE COMPENSATOR TEST	<u> </u>	cm3/1000s. : + 6.0 Aneroid pressure
TOTAL CATORITOR TEST	1	hPa : -
SETTING	+	Rated speed rpm : 500 Del. quantity
Rated speed rpm		cm3/1000 strokes : 129.0 Tolerance
Pressure hPa rack travel mm	: 1500 : 12.45	cm3/1000 strokes : + 1.0 Check tolerance
Tolerance mm Pressure hPa	: +- 0.05	cm3/1000s. : +- 4.0
Rated speed rpm	500	
rack travel mm	8.60	STARTING FUEL DELIVERY
Tolerance mm	: + 0.20 +	

Rated speed rpm : 100 Del. quantity

cm3/1000 strokes : 189.0

Tolerance

cm3/1000 strokes : +- 15.0

Check tolerance

cm3/1000s. : + 19.0

LOW IDLE

Rated speed rpm : 300

Del. quantity cm3/1000 strokes : 29.0

Tolerance

cm3/1000 strokes : + 3.0

Check tolerance

cm3/1000s. : \leftarrow 6.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 01.04.97 Test oil : ISO 4113

Combination No. : 0 402 890 300

Injection pump

Pump designation : PE12P12OA520LS8524

EP type number : 0 421 820 202

Governor

Governer design. : RE30

Governer no. : 0 421 890 036

Cust. part No. : 51.11103-7575

Customer-spec. information

Customer : MAN

Motor : D_2842 LF 03

Power KW : 559.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. *C : 40 Tolerance *C : + 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 3.0 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 6.40 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 13.00 Tolerance mm : + 0.50

Firing order : 12-1-5-9-8

: - 4- 11- 10- 2

Phasing : 0-45-60-105-120

: -180-225-240-285

: -345

Tolerance : + 0.50

Check

tolerance *NW : + 0.75

Start of delivery blocking

Tolerance : + 0.10

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Barrel no. : 12

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 V

TESTING & SETTING RACK TRAVEL SENSOR POSITION Engine speed min-1: Setting point (P, R and H pump) Uact V 3.100 : CRT mm 13.00 Tolerance mm : +/- 0.05 Check : +/- 0.10 tolerance mm Check value (P, R and H pump) Uact V 1,700 CRT min 6.15 Tolerance mm : +/- 0.25 Check : +/- 0.30 tolerance mm Setting point (m pump) Uact V 3.100 12.50 CRT men Tolerance mm : +/- 0.05 Check tolerance mm : +/- 0.10 Check value (qmuq 14) Uact V 1.700 CRT mm 5.50 Tolerance mm : +/- 0.25 Check tolerance mm : +/- 0.30Stop position Uact V : Value with deenergised adjusting magnet and control rod in stop position. 0.75 CRT mm : +/- 0.25 Tolerance mm Check : +/- 0.35 tolerance mm

Test with control rod in stop position Engine speed min-1: Amolitude V Tolerance V : +/- 0.6

Engine speed min-1: 600

Difference Amolitude to

tolerance V

Check

Amplitude V : max.1.4

(C) INJECTION PUMP WITH POSITIONER

1.4

: +/- 1.20

TEST POINT V1

Rated speed rpm 1150 Uact V 3,100 Del. quantity cm3/1000 strokes : 310.0 Tolerance cm5/1000 strokes : + 1.0Check tolerance cm3/1000s.4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0

FUEL DELIVERY CHARACTERISTICS

500

9.0

: +-

Rated speed rpm Uact V 1.900 Del. quantity cm3/1000 strokes : 177.0 Tolerance cm3/1000 strokes : +-5.0 Check tolerance

TEST POINT L1

cm3/1000s.

300 Rated speed rpm Uact V 1.340 Tolerance Volt : + 0.060Check tolerance Volt : + 0.080Del. quantity cm3/1000 strokes : 25.0 Tolerance cm3/1000 strokes : +-3.0 Spreed

Tolerance

cm3/1000 strokes : 8.0

ENGINE-SPEED SENSOR

H and M pumps)

(All P and R pumps not

Check tolerance cm3/1000s.	:	12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 27.03.97 Edition Test oil : ISO 4113

Combination No. : 0 402 946 026

Injection pump

Pump designation : PES6P120A720R88045 EP type number : 0 412 926 028

Governor

Governer design. : RQV350...1100PA1305K

Governer no. : 0 421 815 967

Cust. part No. : 1388631

Customer-spec. information Customer : SCANIA : DSI1174M Motor

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. °C 40 : +-Tolerance °C

Overflow valve : 2 417 473 082

Inlet press. bar : 3.0
Tolerance bar : + 0.1

Overflow quantity

80 min. L/h min. l/h : 80 Tolerance l/h : + 10.0

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

: 251.5 bar Tolerance bar : +- 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : +- 1.0

: 3.65 : + 0.05 Prestroke mm Tolerance mm

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

: 1-5- 3- 6- 2-Firing order

: 4

: 0-60-120-180-240 Phasing

Tolerance : +- 0.30

Check

tolerance *NW : +- 0.50

Start of delivery blocking

Tolerance : \leftarrow 0.10

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 11.75

Tolerance mm : +- 0.05	- guide sleeve
-	travel mm : 4.07
Del. quantity	Tolerance mm : + 0.25
cm3/1000 strokes : 250.0	
	Rated speed rpm : 1400
Tolerance	guide sleeve
$cm3/1000$ strokes : \leftarrow 1.0	travel mm : 13.50
	Tolerance mm : + 0.50
Check tolerance -	-
$cm3/1000s$. : \leftarrow 7.0	
	GUIDE SLEEVE POSITION
Spreed -	-
	-
Tolerance -	- control lever
cm3/1000 strokes : 8.0 -	position degree : - 1
	Rated speed rpm : 1250
Check tolerance -	<u>.</u>
cm3/1000s. : 12.0 -	Rack travel in mm : 10.70
	Tolerance mm : + 2.00
1	+
Dadad analy and 1750	CHILL LOAD API THEN AT THE ACT OF
Rated speed rpm : 350 -	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 4.10	Poted and and 1400
Tolerance mm : 4.10	Rated speed rpm : 1100
	Aneroid pressure
Del. quantity cm3/1000 strokes : 30.0	hPa : 1500
Tolerance	Del. quantity cm3/1000 strokes : 250.0
cm3/1000 strokes : +- 3.0	
Check tolerance	- Tolerance - cm3/1000 strokes : +- 1.0
cm3/1000s. : +- 6.0	- Check tolerance
Spreed -	- cm3/1000s. : +- 7.0
Tolerance -	- Cilis/16003 +- 7.8 - Spreed
cm3/1000 strokes : 4.0	- Spreed - Tolerance
Check tolerance	cm3/1000 strokes : 8.0
cm3/1000s. : 8.0	Check tolerance
CIID/ 10003 0.0	- sm3/1000s. : 12.0
	- MII37 (UCIUS. : 12U
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	
WITH GOVERNOR	- CONTROL LEVER
	- VOITING BEVEN
GUIDE SLEEVE TRAVEL	control lever
	- position degree : 64.0
Rated speed rpm : 1165 -	- tolerance degree : + 4.0
guide sleeve	
travel mm : 10.15	control lever
Tolerance mm : + 0.15	- position degree : 118.0
3	tolerance degree : + 4.0
Rated speed rpm : 350	<u>-</u>
guide sleeve	- RATED SPEED
travel mm : 2.00	rack travel mm : 10.79
Tolerance mm : + 0.20 -	- Rated speed rpm : 1145
	Tolerance 1/min : +- 5
Rated speed rpm : 755	- Check
guide sleeve -	- speed 1/min : +- 10
travel mm : 6.14	
Tolerance mm : + 0.25	rack travel mm : 4.00
	Rated speed rpm : 1235
Rated speed rpm : 460	Tolerance 1/min : + 15

Check speed 1/min	: +- 20	‡	MEASUREMENT	
rack travel mm Tolerance mm	: 0.50 : + 0.50	Ŧ	Rated speed rpm	: 1100
Rated speed rpm		+	Pressure hPa rack travel mm Toleränce mm	: 340 : 8.35 : + 0.25
LOW IDLE		+	Pressure hPa rack travel mm Tolerance mm	: 10.65
control lever position degree tolerance degree	: 71.0 : → 4.0		Start interlock	
control lever position degree	: 17.0	Ŧ	FUEL DELIVERY CHA	RACTERISTICS
tolerance degree Testing:	: + 4.0	† +	Aneroid pressure hPa Rated speed rpm	: 1500 : 700
Rated speed rpm rack travel mm	: 4.10	‡	Del. quantity cm3/1000 strokes Tolerance	
Tolerance mm	: ← 0.10	‡	cm3/1000 strokes Check tolerance	
Rated speed rpm		‡	cm3/1000s.	: +- 6.0
CRT mm min.		‡	Aneroid pressure hPa	: -
Rated speed rpm	: 2/5	 	Rated speed rpm Del. quantity cm3/1000 strokes	
TORQUE CONTROL		Ŧ	Tolerance cm3/1000 strokes	
Rated speed rpm rack travel mm	: 11.75	‡	Check tolerance cm3/1000s.	
Tolerance mm		‡		
Rated speed rpm rack travel mm Tolerance mm	: 10.65	† + +	STARTING FUEL DEL	IVERY
ANEROID/ALTITUDE			Rated speed rpm rack travel mm Tolerance mm	: 7.10
COMPENSATOR TEST		+	Del. quantity cm3/1000 strokes Tolerance	
SETTING		Ŧ	cm3/1000 strokes Check tolerance	: +- 20.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1500 : 11.75		cm3/1000s.	: ← 24.0
Pressure hPa Rated speed rpm	: - : 1100 : 7.10	‡	LOW IDLE	: 350
rack travel mm Tolerance mm		‡	Rated speed rpm	. 550

Del. quantity cm3/1000 strokes	:	30.0
Tolerance cm3/1000 strokes Check tolerance	: +-	3.0
cm3/1000s.	: +-	6.0
Tolerance cm3/1000 strokes	:	4.0
Check tolerance cm3/1000s.	:	8.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 01.04.97 Test oil : ISO 4113

Combination No. : 0 400 876 434

Injection pump

Pump designation : PES6A95D41ORS2864 EP type number : 0 410 896 888

Governor

Governer design. : RSV400...1050A8C2263

: -11L

Governer no. : 0 420 232 635

Cust. part No. : 87 800 972

Customer—spec. information

Customer : NH Motor : P 396

Power KW : 176.0

TEST BENCH REQUIREMENTS

Inlet line : 1.3

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 2.60 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 13.70

Tolerance mm : +- 0.10

Del. quantity

cm3/1000 strokes : 135.0

Tolerance

cm3/1000 strokes : + 1.0

	→ Check tolerance
Check tolerance	+ cm3/1000s. : + 3.0
cm3/1000s. : + 3.0	Spreed
	Tolerance
Spreed	+ cm3/1000 strokes : 3.5
56 (554	Check tolerance
Tolerance	- cm3/1000s. : 8.0
cm3/1000 strokes : 3.5	T (11157 10005. : 0.0
cms/ rough strokes: 3.3	†
Al al Astronomy	†
Check tolerance	
cm3/1000s. : 8.0	+ CONTROL LEVER
	_ †
	+ control lever
	+ position degree : 97.0
Rated speed rpm : 450	+ tolerance degree : +- 4.0
	+
Rack travel in mm: 5.75	+
Tolerance mm : +- 0.10	+ ASSEMBLY GOVERNOR SETTING
Del. quantity	+
cm3/1000 strokes : 12.0	Rated speed rpm : 1095
Toterance	rack travel mm : 11.10
cm3/1000 strokes : + 2.0	1
Check tolerance	Rated speed rpm : 1165
cm3/1000s. : +- 4.5	+ Tolerance 1/min : +- 5
Spreed	rack travel mm : 4.00
Tolerance	T (ack travet limit : 4.00
	T made drawed may 1 0.05
	+ rack travel mm : 0.85
Check tolerance	+ Tolerance mm : +- 0.55
cm3/1000s. : 9.0	+ Rated speed rpm : 1300
	†
	.
(B) SETTING OF INJECTION PUMP	+ Rated speed rpm : 1096
WITH GOVERNOR	+ rack travel mm : 11.10
	1 1 2 1 2 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1
	+
	Rated speed rpm : 1166
	+
GUIDE SLEEVE POSITION	Rated speed rpm : 1166
GUIDE SLEEVE POSITION	Rated speed rpm : 1166 Tolerance 1/min : +- 5
GUIDE SLEEVE POSITION	Rated speed rpm : 1166 Tolerance 1/min : +- 5
	Rated speed rpm : 1166 Tolerance 1/min : +- 5 rack travel mm : 4.00 rack travel mm : 0.85
control lever	Rated speed rpm : 1166 Tolerance 1/min : +- 5 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : +- 0.55
	Rated speed rpm : 1166 Tolerance 1/min : +- 5 rack travel mm : 4.00 rack travel mm : 0.85
control lever position degree : - 3	Rated speed rpm : 1166 Tolerance 1/min : +- 5 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : +- 0.55
control lever position degree : - 3 Rated speed rpm : 800	Rated speed rpm : 1166 Tolerance 1/min : +- 5 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1300
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50	Rated speed rpm : 1166 Tolerance 1/min : +- 5 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1300 Rated speed rpm : 1097
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50	Rated speed rpm : 1166 Tolerance 1/min : +- 5 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1300
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20	Rated speed rpm : 1166 Tolerance 1/min : +- 5 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1300 Rated speed rpm : 1097 rack travel mm : 11.10
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring	Rated speed rpm : 1166 Tolerance 1/min : +- 5 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1300 Rated speed rpm : 1097 rack travel mm : 11.10 Rated speed rpm : 1167
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	Rated speed rpm : 1166 Tolerance 1/min : +- 5 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1300 Rated speed rpm : 1097 rack travel mm : 11.10 Rated speed rpm : 1167 Tolerance 1/min : +- 5
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring	Rated speed rpm : 1166 Tolerance 1/min : +- 5 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1300 Rated speed rpm : 1097 rack travel mm : 11.10 Rated speed rpm : 1167
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	Rated speed rpm : 1166 Tolerance 1/min : +- 5 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1300 Rated speed rpm : 1097 rack travel mm : 11.10 Rated speed rpm : 1167 Tolerance 1/min : +- 5 rack travel mm : 4.00
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4,50	Rated speed rpm : 1166 Tolerance 1/min : +- 5 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1300 Rated speed rpm : 1097 rack travel mm : 11.10 Rated speed rpm : 1167 Tolerance 1/min : +- 5 rack travel mm : 4.00 rack travel mm : 0.85
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	Rated speed rpm : 1166 Tolerance 1/min : +- 5 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1300 Rated speed rpm : 1097 rack travel mm : 11.10 Rated speed rpm : 1167 Tolerance 1/min : +- 5 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : +- 0.55
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4,50 FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 1166 Tolerance 1/min : +- 5 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1300 Rated speed rpm : 1097 rack travel mm : 11.10 Rated speed rpm : 1167 Tolerance 1/min : +- 5 rack travel mm : 4.00 rack travel mm : 0.85
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4,50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700	Rated speed rpm : 1166 Tolerance 1/min : +- 5 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1300 Rated speed rpm : 1097 rack travel mm : 11.10 Rated speed rpm : 1167 Tolerance 1/min : +- 5 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : +- 0.55
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4,50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure	Rated speed rpm : 1166 Tolerance 1/min : +- 5 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1097 rack travel mm : 11.10 Rated speed rpm : 1167 Tolerance 1/min : +- 5 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1300
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4,50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : 1200	Rated speed rpm : 1166 Tolerance 1/min : +- 5 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1097 rack travel mm : 11.10 Rated speed rpm : 1167 Tolerance 1/min : +- 5 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1300 Rated speed rpm : 1300 Rated speed rpm : 1300
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4,50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : 1200 Del. quantity	Rated speed rpm : 1166 Tolerance 1/min : +- 5 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1097 rack travel mm : 11.10 Rated speed rpm : 1167 Tolerance 1/min : +- 5 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1300
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4,50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 135.0	Rated speed rpm : 1166 Tolerance 1/min : +- 5 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1097 rack travel mm : 11.10 Rated speed rpm : 1167 Tolerance 1/min : +- 5 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1300 Rated speed rpm : 1300 Rated speed rpm : 1098 rack travel mm : 1098 rack travel mm : 1098 rack travel mm : 11.10
control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4,50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 700 Aneroid pressure hPa : 1200 Del. quantity	Rated speed rpm : 1166 Tolerance 1/min : +- 5 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1097 rack travel mm : 11.10 Rated speed rpm : 1167 Tolerance 1/min : +- 5 rack travel mm : 4.00 rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1300 Rated speed rpm : 1300 Rated speed rpm : 1300

rack travel mm		+ rack travel mm : 11.20 + Tolerance mm : + 0.05
rack travel mm	: 0.85	†
Tolerance mm	: ← 0.55	+ Rated speed rpm : 1050_
Rated speed rpm	: 1300	+ rack travel mm : 12.50 + Tolerance mm : + 0.10
		+ Tolerance mm : + 0.10
Batad apaed nam	. 1000	†
Rated speed rpm rack travel mm		ANCORD ALTITUDE
rack travet mm	: 11.10	ANEROID/ALTITUDE
Rated speed rpm	: 1169	+ COMPENSATOR TEST
Tolerance 1/min	: +- 5	I
rack travel mm		I SETTING
LACK FLAVE (INH	: 4.00	I SELLING
rack travel mm	: 0.85	Rated speed rpm : 500
Tolerance mm	: +- 0.55	Pressure hPa : 1200
Rated speed rpm	: 1300	rack travel mm : 13.75
nated speed ipili	. 1500	Tolerance mm : +- 0.10
Rated speed rpm	: 1100	Pressure hPa : -
rack travel mm		+ Pressure hPa : - Rated speed rpm : 500
. 4511 61 41 6 1111		rack travel mm : 9.75
Rated speed rpm	: 1170	+ Tolerance mm : +- 0.05
Tolerance 1/min		Total direction with the second
rack travel mm		↓ MEASUREMENT
rack travel mm	: 0.85	+ Rated speed rpm : 500
Tolerance mm		1
Rated speed rpm	: 1300	+ Pressure hPa : 650
•		rack travel mm : 12.65
		+ Tolerance mm : + 0.05
LOW IDLE		+
		+ Pressure hPa : 450
		+ rack travel mm : 11.10
control lever		+ Tolerance mm : + 0.20
position degree		+
tolerance degree	: 4.0	† Start interlock
		+
Testing:		†
Rated speed rpm	. 450	EUEL DELTHERY CHARACTERISTICS
rack travel ma	; 439 • 5.75	FUEL DELIVERY CHARACTERISTICS
rack travel mm Tolerance mm	0.10	Aneroid pressure
LOCELES SOS HIN	. + 0.10	T here is a source
rack traval ma	. 200	Pated speed spm : 500
rack travel mm Rated speed rpm	· 585	hPa : - Rated speed rpm : 500 Del. quantity
Tolerance 1/min	: +- 30	Del. quantity cm3/1000 strokes : 80.0
roterance trimin	50	Tolerance
		cm3/1000 strokes : +- 1.0
TORQUE CONTROL		Check tolerance
		+ cm3/1000s. : + 3.0
Rated speed rpm	: 700	1
rack travel mm	: 13.70	+
Tolerance mm	: ← 0.10	
		STARTING FUEL DELIVERY
Rated speed rpm rack travel mm	: 500	+
rack travel mm Tolerance mm	: 13.75	+ Rated speed rpm : 100
Tolerance mm	: +- 0.10	+ rack travel mm : 20.25
		Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : +- 0.75
Rated speed rpm	: 1050	+

Del. quantity cm3/1000 strokes : 164.0 Tolerance cm3/1000 strokes : +- 8.0 Check tolerance cm3/1000s. : +- 11.0

LOW IDLE

450 Rated speed rpm Del. quantity cm3/1000 strokes : 12.0 Tolerance cm3/1000 strokes : +-2.0 Check tolerance cm3/1000s. 4.5 Spreed Tolerance 5.5 cm3/1000 strokes : Check tolerance cm3/1000s. 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 07.04.97 Test oil : ISO 4113

Combination No. : 0 402 744 806

Injection numb

Pump designation : PES4P120A320RS7431

EP type number : 0 412 724 805

Governor

Governer design. : RQV325...1500PA1333

: 1K

Governer no. : 0 421 815 555

Cust. part No. : 3393633

Customer—spec. information Customer : CDC Motor : 48TA-A Power KW : 179.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0
Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 4.00
Tolerance mm : +- 0.05
Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Start of delivery blocking

*NW after s.o.d. : 11.00 Tolerance : +- 0.50

Check

tolerance "NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1500

Rack travel in mm : 15.00 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 201.5

Tolerance cm3/1000 strokes : +- 1.0	<pre>guide sleeve travel mm : 13.50 Tolerance mm : +~ 0.50</pre>
Check tolerance cm3/1000s. : +- 4.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Spreed	+
Tolerance cm3/1000 strokes : 8.0	Rated speed rpm : 1500 Aneroid pressure hPa : 900 Del. quantity
Check tolerance cm3/1000s. : 12.0	cm3/1000 strokes : 201.5 + Tolerance + cm3/1000 strokes : +- 1.0
Rated speed rpm : 325	Check tolerance : + 4.0 Spreed
Rack travel in mm : 8.10 Tolerance mm : + 0.10 Del. quantity	Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0
cm3/1000 strokes : 26.5 Tolerance cm3/1000 strokes : +- 3.0	- cm3/1000s. : 12.0
Check tolerance cm3/1000s. : - 5.0 Spreed	CONTROL LEVER
Tolerance cm3/1000 strokes : 4.0 Check tolerance	position degree : 118.0 tolerance degree : + 4.0
cm3/1000s. : 8.0	PATED SPEED rack travel imm : 14.00 Rated speed rpm : 1555
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Tolerance 1/min : + 5
GUIDE SLEEVE TRAVEL	rack travel mm : 5.50 Rated speed rpm : 1710 Tolerance 1/min : + 15
Rated speed rpm : 1555 guide sleeve travel mm : 9.02 Tolerance mm : + 0.15	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1800
Rated speed rpm : 325 guide sleeve travel mm : 1.21 Tolerance mm : + 0.20	LOW IDLE
Rated speed rpm : 1007 guide sleeve travel mm : 5.41 Tolerance mm : +- 0.25	control lever position degree : 79.0 tolerance degree : +- 4.0
Rated speed rpm : 560 guide sleeve travel mm : 3.15	Control lever difference Grad: 39.0 tolerance degree: + 6.0
Tolerance mm : + 0.25	Testing:
Rated speed rpm : 1970	Rated speed rpm : 325

rack travel mm : 8.10 Del. quantity : + 0.10cm3/1000 strokes : 189.5 Tolerance mm Tolerance : 275 Rated speed rpm : > 8.80 CRT mm min. Spreed Rated speed rpm 400 Tolerance TORQUE CONTROL 1500 Rated speed rpm : rack travel mm : 15.00 hPa : + 0.05Toterance mm : 1100 Rated speed rpm rack travel mm 14.70 Tolerance : + 0.20Tolerance mm 750 Rated speed rpm 13.90 rack travel mm : + 0.20Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Tolerance 1500 Rated speed rom Pressure hPa Pressure hPa 750 Rated speed rpm 12.20 rack travel mm Tolerance mm : + 0.20 LOW IDLE MEASUREMENT : 1500 Rated speed rpm 570 Pressure hPa : 13.40 Tolerance rack travel mm Tolerance mm : ← 0.20 Pressure hPa 500 12.90 rack travel mm Spreed Tolerance mm : **←** 0.20 Tolerance Start interlock FUEL DELIVERY CHARACTERISTICS

cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. : +-6.0 cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0 Aneroid pressure Rated speed rpm 750 Del. quantity cm3/1000 strokes : 126.0 cm3/1000 strokes : +- 1.0Check tolerance cm3/1000s. 3.0 STARTING FUEL DELIVERY Rated speed rpm 100 rack travel mm : 11.60 Tolerance mm : +- 0.50 Del. quantity cm3/1000 strokes : 122.0 cm3/1000 strokes : +- 20.0Check tolerance cm3/1000s. : \leftarrow 25.0 Rated speed rpm : 325 Del. quantity cm3/1000 strokes : 26.5 cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. : +-5.0 cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. 0.8

End of test specification sheet

Aneroid pressure

900 1100 Rated speed rpm :

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 03.03.97 Test oil : ISO 4113

Combination No. : 0 400 075 925Y

Injection pump

Pump designation : PES5M55C32ORS201 EP type number : 0 410 055 972Y

Governor

Foverner design. : RSF350/2500M56-13 Governer no. : 0 420 021 171

Cust, part No. :

Customer-spec. information

Customer : MB-PKW Motor : 0M605

Power KW : 83.0

TEST BENCH REQUIREMENTS

Test oil inlet

remp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 469 990 351

Inlet press. bar : 1.0

Test nozzle holde

assembly : 1 688 901 111

Opening pressure

bar : 148.5 Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 1.75
Tolerance mm : + 0.05
Check

tolerance mm : + 0.10

Rack travel in mm : 21.00 Tolerance mm : + 1.00

Firing order : 1-2-4-5-3

Phasing : 0-72-144-216-288

Start of delivery blocking

*NW after s.o.d. : 16.50 Tolerance : + 0.20

Check

tolerance *NW : +- 0.30

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1400

Rack travel in mm : 12.75 Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 37.0

Tolerance

cm3/1000 strokes : \leftarrow 0.5

Check tolerance

cm3/1000s. : +- 1.5

Spreed

Tolerance cm3/1000 strokes : 2.5	CRT mm max. : 1.95
Check tolerance cm3/1000s. : 3.0	LOW IDLE
Rated speed rpm : 350	Setting point w/out bumper spring
Rack travel in mm: 7.40 Tolerance mm: + 0.10	Rated speed rpm : 350 rack travel mm : 7.40
Del. quantity cm3/1000 strokes : 8.5	SET IDLE AUXILIARY SPRING
Tolerance cm3/1000 strokes : + 0.5	Rated speed rpm : 475 rack travel mm : 5.40 Tolerance mm : → 0.10
Spreed Tolerance	
cm3/1000 strokes : 1.0	Load pick-up
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 1400 CRT mm max. : 1.95
WITH GOVERNOR	CRT mm max. : 1.95 rack travel mm : 7.40
IDLE STAGE	Rated speed rpm : 350
Rack travel in mm: 6.25 Tolerance mm: + 0.25	TORQUE CONTROL
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 1400 rack travel nm : 12.75 Tolerance mm : +- 0.05
Rated speed rpm : 1400 + Ref. pressure +	Rated speed rpm : 2300
ALDA / ADA hPa : 1100 + Del. quantity +	rack travel mm : 12.30 Tolerance mm : +- 0.15
cm3/1000 strokes : 37.0 + Tolerance cm3/1000 strokes : + 0.5	Rated speed rpm : 2500
Check tolerance + 1.5 + 1.5	rack travel mm : 11.90 Tolerance mm : +- 0.15
Spreed + Tolerance +	ADJUSTMENT TEST ADA/ALDA
cm3/1000 strokes : 2.5 Check tolerance	SETTING
cm3/1000s. : 3.0	Rated speed rpm : 1400
RATED SPEED	Ref. pressure ALDA / ADA hPa : 940 rack travel mm : -0.10
Tolerance mm : + 0.30	Tolerance mm : + 0.10
Rated speed rpm : 3150 rack travel mm : 0.50	MEASUREMENT
Tolerance mm : + 0.50	Rated speed rpm : 1400 Ref. pressure
SET IDLE CONTROL LEVER POSITION	ALDA / ADA hPa : 900 rack travel mm : -0.40
Rated speed rpm : 1400	Tolerance mm : + 0.10

Ref. pressure		+ Del. quantity
ALDA / ADA hPa	: 750	+ cm3/1000 strokes : 55.0
rack travel mm		Tolerance
Tolerance mm	: +- 0.20	+ cm3/1000 strokes : + 4.0
		+ Check tolerance
		+ cm3/1000s. : +- 5.0
		+ Spreed
FUEL DELIVERY CHA	NRACTERISTICS	+ Tolerance
		+ cm3/1000 strokes : 6.0
Ref. pressure	4400	+ Check tolerance
ALDA / ADA hPa		+ cm3/1000s. : 6.0
Rated speed rpm	: 2300	†
Del. quantity cm3/1000 strokes	. 70.7	†
Tolerance	: 39.3	†
cm3/1000 strokes	• + 0.8	LOW IDLE
Check tolerance	. + 0.0	T LOW IDLE
cm3/1000s.	: 1.8	Rared speed rpm : 350
Spreed	• • • • • • • • • • • • • • • • • • • •	+ Del. quantity
Tolerance		- cm3/1000 strokes : 9.5
cm3/1000 strokes	: 2.5	+ Check tolerance
Check tolerance		- cm3/1000s. : +- 2.3
cm3/1000s.	: 3.0	+ Spread
		+ Check tolerance
Ref. pressure		+ cm3/1000s. : 1.5
ALDA / ADA hPa		+
Rated speed rpm	: 2500	+
Spreed		
Del. quantity	70.0	+
cm3/1000 strokes	: 38.0	†
Tolerance	1.0	
cm3/1000 strokes	: +- 1.0	control lever
Check tolerance cm3/1000s.	: + 2.0	position degree : > 49.00
Spreed	. +- 2.0	Ť
Tolerance		T control lever
cm3/1000 strokes	: 2.5	position degree : < 46.50
Check tolerance	. 2.3	posteror degree
	: 3.0	
		+ SETTING PNEUMATIC FAST IDLE (PLA)
		+ (PLA) POSITION
		+
MIGH IDLE		+ Rated speed rpm : 400
.		†
Ref. pressure	. 4400	+ Rack travel in mm: 8.25
ALDA / ADA hPa		+ Tolerance mm : + 0.70
Tolerance mm	: ← U.3U	+ Del. quantity
Del. quantity cm3/1000 strokes	. 1/. 0	+ cm3/1000 strokes : 12.0 + Tolerance
Tolerance	: 14.0	+ cm3/1000 strokes : +- 3.5
cm3/1000 strokes	· + 2 N	Check tolerance
Check tolerance		- cm3/1000s. : + 4.5
cm3/1000s.		Vacuum hPa : 450.0
		+30.0
**************************************		+
STARTING FUEL DEL	IVERY	+
Rated speed rpm	: 100	TESTING MEDIATIC SHUTOFF DEVICE
rack travel mm	: 21.60	† <u> </u>
Tolerance mm	: +- 1.50	+ Rated speed rpm : 350

Vacuum hPa : -450.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 07.04.97 Edition Test oil : ISO 4113

Combination No. : 0 401 846 913

Injection pump

Pump designation : PE6P110A720R33243 EP type number : 0 411 816 770

Governor

Governer design. : RQV250...1100PA413

Governer no. : 0 421 813 811

Cust. part No. :

Customer-spec. information Customer : HAEP Motor : WD615.68

206.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C 40 Tolerance °C

Overflow valve : 1 417 413 025

Inlet press. bar : Tolerance bar : + 0.1

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 bar Tolerance bar

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 10.50 Tolerance min : +- 1.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 : +- 0.30 Phasing

Tolerance

Check

tolerance *NW : +- 0.50

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerance *NW : **←** 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack trave'. in mm: 13.75 Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 184.0

Tolerance cm3/1000 strokes : +- 1.0	guide sleeve travel mm : 9.70 Tolerance mm : +- 0.25
Check tolerance cm3/1000s. : + 4.0	
Spreed	GUIDE SLEEVE POSITION
Tolerance cm3/1000 strokes : 4.0	control lever position degree : - 1 Rated speed rpm : 1200
Check tolerance	Rack travel in mm : 12.70 Tolerance mm : + 1.30
Rated speed rpm : 250	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 4.00 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 18.0 Tolerance cm3/1000 strokes: + 3.0 Check tolerance cm3/1000s.: + 6.0 Spreed Tolerance cm3/1000 strokes: 4.5 Check tolerance cm3/1000s.: 7.5 (B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 1100 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 184.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000 strokes : 7.5 CONTROL LEVER
GUIDE SLEEVE TRAVEL	control lever
Rated speed rpm : 1145 guide sleeve	<pre>pcsition degree : 106.0 tolerance degree : +- 4.0</pre>
travel mm : 8.40 Tolerance mm : + 0.10 Rated speed rpm : 250	RATED SPEED rack travel mm : 12.70 Rated speed rpm : 1145 Tolerance 1/min : +- 5
guide sleeve travel mm : 1.10 Tolerance mm : + 0.10	rack travel mm : 4.00 Rated speed rpm : 1255 Tolerance 1/min : +- 15
Rated speed rpm : 700 guide sleeve travel mm : 4.70 Tolerance mm : + 0.25	rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1350
Rated speed rpm : 350 guide sleeve travel mm : 2.00 Tolerance mm : + 0.25	LOW IDLE
Rated speed rpm : 1250	

		+	Rated speed rpm	: < 170
control lever position degree tolerance degree	: 72.0 : + 4.0	+	Check speed 1/min	
Testing:		‡	Check speed 1/min	: < 190
Rated speed rpm rack travel mm Tolerance mm	: 250 : 4.00 : + 0.10	‡	FUEL DELIVERY CHA	RACTERISTICS
Rated speed rpm	: 100	‡	Aneroid pressure hPa	: -
CRT mm min.	: > 5.50	‡	Rated speed rpm Del. quantity cm3/1000 strokes	
Rated speed rpm	: 300	.]	Tolerance cm3/1000 strokes	
TORQUE CONTROL		+	Check tolerance cm3/1000s.	
Rated speed rpm rack travel mm Tolerance mm	: 1100 : 13.75 : ← 0.05	† †	Aneroid pressure hPa Rated speed rpm Del. quantity	: - : 500
Rated speed rpm rack travel mm Tolerance mm	: 13.75	† †	cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: +- 1.0
ANEROID/ALTITUDE COMPENSATOR TEST		——— <u>†</u>	cm3/1000s.	: + 4.0
SETTING		Ŧ	STARTING FUEL DEL	IVERY
Rated speed rpm Pressure hPa rack travel mm	: 1200 : 13.75	<u> </u>	Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 245.0
	: - 0.05	+	cm3/1000 strokes Check tolerance	
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	500 10.05 + 0.15	†	cm3/1000s.	: + 24.0
MEASUREMENT		1	LOW IDLE	
Rated speed rpm	: 500	+	Rated speed rpm Del. quantity	: 250
Pressure hPa rack travel mm	: 375 : 11. 00	‡	cm3/1000 strokes Tolerance	: 18.0
Tolerance mm	: + 0.10	<u> </u>	cm3/1000 strokes Check tolerance	: ← 3.0
Pressure hPa rack travel mm Tolerance mm	: 630 : 12.95 : + 0.05	+	cm3/1000s. Spreed Tolerance	: +- 6.0
Start interlock		Ī	cm3/1000 strokes Check tolerance	
		+	cm3/1000s.	: 7.5

Rated speed rpm : > 100

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 09.04.97 Test oil : ISO 4113

Combination No. : 0 401 848 828

Injection pump

Pump designation : PE8P120A520/4LS3850

EP type number : 0 411 828 723

Governor

Governer design. : RQ300/900PA1230 Governer no. : 0 421 801 792

Cust. part No. :

Customer-spec. information Customer : DWI

Motor : D2848LE

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. *C : 40
Tolerance *C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.05
Tolerance mm : + 0.05
Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 8-7-2-6-3

: - 4- 1

Phasing : 0-45-90-135-180

: -270-315
Tolerance : + 0.30

Check

tolerance NW : + 0.50

Start of delivery mark

Barrel no. : 8

BASIC SETTING

Rated speed rpm : 850

Rack travel in mm : 12.20

Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 215.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Spreed S	
Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0 Rated speed rpm : 300 Rack travel in mm : 7.40 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 42.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 10.0 Check tolerance cm3/1000s. : + 4.0	
Check tolerance cm3/1000S. : 10.0 Rated speed rpm : 300 Rack travel in mm : 7.40 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 42.0 Tolerance cm3/1000S. : + 6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000 strokes : 4.0	_
Dosition degree : 109 Rated speed rpm : 600	
Tolerance mm : 7.40	
cm3/1000 strokes : 42.0 + FULL LOAD DELIVERY AT FULL LOAD STOP Tolerance cm3/1000 strokes : + 3.0 + Rated speed rpm : 850 Check tolerance cm3/1000s. : + 6.0 + Aneroid pressure in Pa : - Del. quantity Tolerance cm3/1000 strokes : 6.0 + Tolerance cm3/1000 strokes : 215.0 Check tolerance cm3/1000s. : 10.0 + Check tolerance cm3/1000s. : + 4.0	
Check tolerance - Aneroid pressure cm3/1000S. : + 6.0 - inPa : Spreed - Del. quantity Tolerance - cm3/1000 strokes : 215.0 cm3/1000 strokes : 6.0 - Tolerance check tolerance - cm3/1000 strokes : + 1.0 cm3/1000S. : 10.0 - Check tolerance cm3/1000S. : + 4.0	
Spreed — Del. quantity Tolerance — cm3/1000 strokes : 215.0 cm3/1000 strokes : 6.0 — Tolerance Check tolerance — cm3/1000 strokes : — 1.0 cm3/1000s. : 10.0 — cm3/1000s. : + 4.0	
Check tolerance + cm3/1000 strokes : + 1.0 cm3/1000S. : 10.0 + Check tolerance cm3/1000S. : + 4.0	
(B) SETTING OF INJECTION PUMP + Tolerance WITH GOVERNOR + cm3/1000 strokes : 6.0 + Check tolerance	
GUIDE SLEEVE TRAVEL + cm3/1000S. : 10.0	
Rated speed rpm : 932 guide sleeve	
Rated speed rpm : 300 + tolerance degree : + 4.0 guide sleeve	
travel mm : 1.44 + control lever Tolerance mm : + 0.10 + position degree : 94.0 + tolerance degree : + 4.0	
Rated speed rpm : 880 + RATED SPEED travel mm : 10.90	
Tolerance mm : + 0.10 + Rated speed rpm : 925 Tolerance 1/min : + 5 Rated speed rpm : 433 +	
guide sleeve + rack travel mm : 4.00 travel mm : 4.94 + Rated speed rpm : 970 Tolerance mm : + 0.10 + Tolerance 1/min : + 15	
Rated speed rpm : 510	

LOW IDLE control lever 75.0 position degree : tolerance degree : +- 4.0 control lever position degree : 13.0 tolerance degree : +- 4.0 Testing: 300 Rated speed rpm rack travel mm 7.40 Tolerance mm : + 0.10 2.00 rack travel mm Rated speed rom 420 20 Tolerance 1/min 200 Rated speed rpm 9.80 CRT mm min. : > TORQUE CONTROL 850 Rated speed rpm rack travel mm 12.20 Tolerance mm : ← 0.05 Rated speed rpm 650 12.20 rack travel mm Tolerance mm : + 0.10Start interlock 100 Rated speed rpm : > Rated speed rpm : < 220 Check speed 1/min : > 80 Check 240 speed 1/min : < FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa Rated speed rpm 650 Del. quantity cm3/1000 strokes : 218.0 Tolerance cm3/1000 strokes : +-3.0

Check tolerance cm3/1000s.: + 6.0 STARTING FUEL DELIVERY Del. quantity cm3/1000 strokes : 190.0 Tolerance cm3/1000 strokes : \leftarrow 20.0 Check tolerance cm3/1000s. : + 24.0LOW IDLE 300 Rated speed rpm : Del. quantity cm3/1000 strokes: 42.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s.6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance 10.0 cm3/1000s.End of test specification sheet

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 04.04.97 Test oil : ISO 4113

Combination No. : 0 402 046 832

Injection pump

Pump designation : PES6P110A720RS3104 EP type number : 0 412 C16 712

Governor

Governer design. : RQV350...1100PA850

Governer no. : 0 421 813 975

Cust. part No. : 04187477KY0142-17

Customer-spec. information

Customer: : KHD

Motor : BF6L513RC

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : ← 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter: 1.5

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50
Tolerance mm : + 1.50

Firing order : 6-2-4-1-5-

: 3

Phasing : 0-60-120-180-240

Tolerance : \leftarrow 0.30

Check

tolerance $^{\circ}NW$: \leftarrow 0.50

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerance *NW : +- 0.75

Barrel no. : 6

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 13.95

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 164.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

M10

Check tolerance cm3/1000s.	: + 4.0	GUIDE SLEEVE POSITION
Spreed		GOIDE SCEEVE POSITION
Tolerance cm3/1000 strokes	: 4.0	control lever position degree : - 1 Rated speed rpm : 1140
Check tolerance cm3/1000s.	: 7.5	Rack travel in mm : 16.50 Tolerance mm : + 1.30
Rated speed rpm	: 350	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in m	n: 7.90 I	Rated speed rpm : 1100
Tolerance nm		Aneroid pressure
Del. quantity	t +	hPa : 900
cm3/1000 strokes Tolerance	: 19.0	Del. quantity cm3/1000 strokes : 164.0
cm3/1000 strokes	: - 2.5	Tolerance
Check tolerance	1	cm3/1000 strokes : + 1.0
cm3/1000s.	: +- 5.0	Check tolerance
Spr ee d Toler a nce	†	cm3/1000s. : +- 4.0 Spreed
cm3/1000 strokes	: 4.5	Tolerance
Check tolerance	+	cm3/1000 strokes : 4.0
cm3/10008.	: 7.5	Check tolerance cm3/1000s. : 7.5
(B) SETTING OF IN WITH GOVERNOR	NJECTION PUMP	CONTROL LEVER
GUIDE SLEEVE TRAV	/EL +	control lever
Rated speed rpm	: 1160	position degree : 120.0 tolerance degree : +- 4.0
guide sleeve travel mm	: 8.70	RATED SPEED
Tolerance mm	: + 0.10	rack travel mm : 12.90
	 	Rated speed rpm : 1135
Rated speed rpm guide sleeve	1	Tolerance 1/min : + 5
travel min	: 1.20 : + 0.10	rack travel mm : 4.00
Tolerance mm	· - 0.10	Rated speed rpm : 1205 Tolerance 1/min : +- 15
Rated speed rpm guide sleeve	}	rack travel mm : 0.70
travel mm	: 2.90	Tolerance mm : + 0.70
Tolerance mm	: + 0.30	Rated speed rpm : 1310
Rated speed rpm guide sleeve	: 590	
travel mm	: 4.20	
Tolerance mm	: + 0.30	LOW IDLE
Rated speed rpm		
منت فمصادف م	1	control lever
guide steeve travel mm Tolerance mm	: 10.00	control lever position degree : 88.0 tolerance degree : +- 4.0

		l Charl
Testing:		+ Check + speed */min : < 290
resting.		T Speed Failth
Rated speed rpm	: 350	
rack travel mm	: 7.90	FUEL DELIVERY CHARACTERISTICS
Tolerance mm	: 0.10	+
Dated aread are	: 100	+ Aneroid pressure + hPa : 900
Rated speed rpm	: 100	+ hPa : 900 + Rated speed rpm : 700
CRT mm min.	: > 9.50	Del. quantity
	. ,,,,,	- cm3/1000 strokes : 164.0
Rated speed rpm	: 435	+ Tolerance
		+ cm3/1000 strokes : +- 2.0
TARALE ANERAL		+ Check tolerance
TORQUE CONTROL		+ cm3/1000s. : +- 5.0
Rated speed rpm	: 1100	+ Spreed + Tolerance
rack travel mm		cm3/1000 strokes : 6.0
Tolerance mm	: ← 0.05	Check tolerance
		+ cm3/1000s. : 9.0
Rated speed rpm		+
rack travel mm		+ Ameroid pressure
Tolerance mm	: ← 0.10	+ hPa : ~
		+ Rated speed rpm : 450 + Del. quantity
ANEROID/ALTITUDE	· 	cm3/1000 strokes : 124.0
COMPENSATOR TEST		Tolerance
		+ cm3/1000 strokes : + 1.0
		+ Check tolerance
SETTING		+ cm3/1000s. : +- 4.0
Date of amount and	500	+ Spreed
Rated speed rpm Pressure hPa	: 500 : 900	+ Tolerance + cm3/1000 strokes : 4.0
rack travel mm		+ Check tolerance
Tolerance mm		+ cm3/1000s. : 7.5
		+
Pressure hPa	: -	+
Rated speed rpm	: 500	
	: 12.40	STARTING FUEL DELIVERY
Tolerance mm	: ← 0.10	+ Rated speed rpm : 100
MEASUREMENT		+ Del. quantity
· NO TOWNSON THAT I		cm3/1000 strokes : 185.0
Rated speed rpm	: 500	+ Tolerance
		+ cm3/1000 strokes : +- 15.0
Pressure hPa	: 370	+ Check tolerance
rack travel mm	: 12.80	+ cm3/1000s. : + 19.0
Tolerance mm	: 0.10	<u>†</u>
Pressure hPa	: 450	1
rack travel mm	: 13.45	
Tolerance mm	: ← 0.05	1 LOW IDLE
Start interlock		Rated speed rpm : 350
Dated anned ann	. > 100	+ Del. quantity + cm3/1000 strokes : 19.0
Rated speed rpm Rated speed rpm		+ Tolerance
varen sheen i his	210	cm3/1000 strokes : +- 2.5
Check		+ Check tolerance
speed 1/min	: > 80	+ cm3/1000s. : +- 5.0

Spreed Tolerance

cm3/1000 strokes : 4.5 Check tolerance cm3/1000s. : 7.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 08.04.97 : ISO 4113

Combination No. : 0 402 066 706

Injection pump

Pump designation : PES6P120A120RS3358

EP type number : 0 412 026 784

Governor

Governer design. : RSV475...1250P2A613

: 1

Soverner no.

: 0 421 833 505

Cust. part No. : 3927357

Customer-spec. information Customer : CDC

Motor

: 6BTA-590 ELITE

Power KW

: 138.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

Tolerance °C

: **←** 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 1 688 901 103

Opening pressure

bar

: 208.5

Tolerance bar

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : +- 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50

Tolerance mm : \leftarrow 1.50

Firing order : 1-5- 3- 6- 2-

: 4

: 0-60-120-180-240 Phasing

Tolerance : ← 0.30

Check

tolerance *NW : +- 0.50

Start of delivery blocking

*NW after s.o.d. : 7.75

Tolerance : +- 0.50

Check

tolerance 'NW : **←** 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm: 11.30

Tolerance mm : \leftarrow 0.05

el. quantity m3/1000 strokes	: 140.0
olerance m3/1000 strokes	: + 1.0
Check tolerance cm3/1000s.	: +- 3.0
Spreed	
Tolerance cm3/1000 strokes	: 4.0
Check tolerance cm3/1000s.	: 7.5
Rated speed rpm	: 475
Rack travel in mm Folerance mm Del. quantity	
cm3/1000 strokes Tolerance	: 21.0
m3/1000 strokes Check tolerance	: - 2.0
cm3/1000s. Spreed	: ← 4.5
Tolerance cm3/1000 strokes Check tolerance	: 6.0
cm3/1000s.	: 9.0
B) SETTING OF INJ WITH GOVERNOR	ECTION PUMP
GUIDE SLEEVE POSIT	TION
control lever position degree Rated speed rpm	: - 3 : 800
position degree	: 800

Aneroid pressure	: 1500
Del. quantity cm3/1000 strokes	
Tolerance cm3/1000 strokes	: + 1.0
Check tolerance cm3/1000s.	: +- 3.0
Spreed Tolerance	
cm3/1000 strokes Check tolerance	: 4.0
cm3/1000s.	: 7.5
CONTROL LEVER	
control lever position degree	: 107.0
tolerance degree	: +- 4.0
RATED SPEED rack travel mm	: 10.30
Rated speed rpm Tolerance 1/min	: 1295 : +- 5
rack travel mm	
Rated speed rpm Tolerance 1/min	: 1365
	: + 15
rack travel mm Tolerance mm	: 0.85 : + 0.55
Rated speed rpm	: 1500
rack travel mm Rated speed rpm	: 4.00 : 1375
LOW IDLE	
control lever	
nosition decree	• 83.0

control lever
position degree : 83.0
tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 475 rack travel mm : 4.90 Tolerance mm : +- 0.10

Testing:

Rated speed rpm : 475 rack travel mm : 5.40 Tolerance mm : + 0.10

Rated speed rpm : 1250

rack travel mm	: 2.00	+ .	Tolerance	
Rated speed rpm			cm3/1000 strokes	. 8.0
Tolerance 1/min			Check tolerance	
			cm3/1000s.	: 12.0
TORQUE CONTROL		\perp	Aneroid pressure	
TOTAL CONTINUE			hPa	• _
Rated speed rpm	• 1250	$oldsymbol{1}$	Rated speed rpm	: 500
rack travel mm		\mathbf{I}	Del. quantity	. 500
Tolerance mm		Ţ	cm3/1000 strokes	. 07.0
roterarice min	; + 0.07			: 97.0
	. 756		Tolerance	
Rated speed rpm			cm3/1000 strokes	: +- 2.0
rack travel mm	: 17.30		Check tolerance	
Tolerance mm	: ← 0.10	+ '	cm3/1000s.	: +- 4.0
		+		
the Principle Company of the Company				
ANEROID/ALTITUDE		+ ·		
COMPENSATOR TEST		+ :	STARTING FUEL DEL	IVERY
		+		
		+ 1	Rated speed rpm	: 100
SETTING		+	rack travel mm	: 20.25
		+ ·	Tolerance mm	: ← 0.75
Rated speed rpm	: 500	<u>.</u> 1	Del. quantity	
Pressure hPa			cm3/1000 strokes	: 165.0
			Tolerance	
rack travel mm Tolerance mm	: + 0.05		cm3/1000 strokes	· +- 20 0
	. 0.03		Check tolerance	20.0
Pressure hPa	: -		cm3/1000s.	: +- 25.0
Rated speed rpm	500	1	CIID7 10000.	29.0
rack travel mm	. 000	T		
Tolerance mm		Ţ		
roterarice mm	: 0.20	Ť		
MEASUREMENT		Ţ	LOW IDLE	
MENSUREMENT		Ţ '	LOW INTE	
Deduct amount was	. 500	† ,	Data dama a da a a a	. /75
Rated speed rpm	: 500	† !	Rated speed rpm	: 475
	000	† '	Del. quantity	24.0
Pressure hPa	: 900		cm3/1000 strokes	: 21.0
rack travel mm	: 10.75		Tolerance	
Tolerance mm	: ← 0.20		cm3/1000 strokes	: 2.0
			Check tolerance	
Pressure hPa	: 560		cm3/1000s.	:
rack travel mm	: 9.55	+ ;	Spreed	
Tolerance mm	: +- 0.05	→ '	Tolerance	
		+ (cm3/1000 strokes	: 6.0
Start interlock		+ (Check tolerance	
		+ (cm3/1000s.	: 9.0
		1		
		 		
FUEL DELIVERY CHA	RACTERISTICS	1		
:		↓ .		
Aneroid pressure		1		
hPa	: 1500	1 ,	End of test speci	firation sheet
Rated speed rpm		1	am or test speci	Treation sheet
Del. quantity	. , ,,,,	I		
cm3/1000 strokes	: 157.0	Ţ		
	: 157.0	Ť		
Tolerance	70	†		
CMS/IIFFI CTPOFAC	· 11			

cm3/1000 strokes : +-

Check tolerance cm3/1000s. Spreed 3.0

: **←** 6.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 08.04.97 : ISO 4113 Test oil

Combination No. : 0 402 066 711

Injection pump

Pump designation : PES6P120A120RS3358 EP type number : 0 412 026 784

Governor

Governer design. : RSV475...1100P2A661

Governer no. : 0 421 833 581

Cust. part No. : 3283574

Customer-spec. information Customer : CUMMINS Motor : 6BTAA ELITE Power KW : 139.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : +- 2.0 Tolerance °C

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0

Overflow quantity

min. l/h : 100 Tolerance l/h : +- 20.0

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0 x length mm 3 600

REMARKS

(A) INJECTION FUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05 Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240 Tolerance : +- 0.30

tolerance *NW : **←** 0.50

Start of delivery blocking

*NW after s.o.d. : 6.75 Tolerance : + 0.10

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

1	
Rack travel in mm: 12.90 Tolerance mm: + 0.05	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes : 180.0	Rated speed rpm : 1100 Aneroid pressure hPa : 1600
Tolerance cm3/1000 strokes : + 1.0	Del. quantity cm3/1000 strokes : 180.0 Tolerance
Check tolerance cm3/1000s. : + 3.0	cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.0
Spreed	Spreed Tolerance
Tolerance cm3/1000 strokes : 4.0	cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 7.5
Check tolerance cm3/1000s. : 7.5	CIIS/ 1000s /.5
	CONTROL LEVER
Rated speed rpm : 475	control lever position degree : 102.0
Rack travel in mm: 7.20 Tolerance mm: +- 0.10	tolerance degree : + 4.0
Del. quantity cm3/1000 strokes : 60.0	RATED SPEED rack travel mm : 11.90 Rated speed rpm : 1145
cm3/1000 strokes : + 2.0 + Check tolerance	Tolerance 1/min : + 5
cm3/1000s. : +- 4.5 Spreed Tolerance	rack travel mm : 4.00 Rated speed rpm : 1260 Tolerance 1/min : +- 15
cm3/1000 strokes : 6.0 + Check tolerance	rack travel mm : 0.85
cm3/1000s. : 9.0	Tolerance mm : +- 0.55 Rated speed rpm : 1400
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 4.00 Rated speed rpm : 1280
GUIDE SLEEVE POSITION	LOW IDLE
control lever position degree : -3 Rated speed rpm : 800	control lever position degree : 84.0 tolerance degree : +- 4.0
Rack travel in mm: 0.50 Tolerance mm: + 0.20	Setting point w/out bumper spring
governor spring + pre-tension +	Rated speed rpm : 475 rack travel mm : 6.70 Tolerance mm : + 0.10
click setting x : 3.75	
+	Testing:

			•	
Rated speed rpm rack travel mm Tolerance mma	: 475 : 7.20 : + 0.10	† †	Tolerance cm3/1000 strokes Check tolerance	
		Ŧ	cm3/1000s. Spreed	: +- 6.0
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 645 : +- 30	‡	Tolerance cm3/1000 strokes	: 12.0
Toterance Train	. +- 50		Check tolerance cm3/1000s.	: 16.0
TORQUE CONTROL		1	Aneroid pressure	• -
Rated speed rpm rack travel mm	: 1100 : 12.90	<u>†</u>	Rated speed rpm Del. quantity	500
Tolerance mm	: +- 0.05	$\frac{1}{1}$	cm3/1000 strokes Tolerance	: 90.0
Rated speed rpm rack traval mm		* 1	cm3/1000 strokes	: ← 2.0
Tolerance mm	: + 0.10	Ī	Check tolerance cm3/1000s.	: +- 4.0
ANEROID/ALTITUDE		 		
COMPENSATOR TEST		<u> </u>	STARTING FUEL DEL	IVERY
SETTING		<u>†</u>	Rated speed rpm rack travel mm	: 100 : 20.25
SELLTING		Ţ	Tolerance num	: <i>←</i> 0.75
Rated speed rpm	: 500	1	Del. quantity	0.15
Pressure hPa	: 1600	+	cm3/1000 strokes	: 175.0
rack travel mm	: 12.90	+	Tolerance	
Tolerance mm	: +- 0.05	+	cm3/1000 strokes	: ← 20.0
Banasian bon	_	†	Check tolerance	: +- 25.0
Pressure hPa Rated speed rpm	500	Ī	cm3/1000s.	: +- 25.0
rack travel mm	: 8.60	I		
Tolerance mm	: + 0.20	+		
MEASUREMENT		+	LOW IDLE	
Rated speed rpm	: 500	Ŧ	Rated speed rpm	: 475
Pressure hPa	: 900	İ	Del. quantity cm3/1000 strokes	: 60.0
rack travel mm	: 11.10	1	Tolerance	. 00.0
Tolerance mm	: + 0.20	+	cm3/1000 strokes	: ← 2.0
	5/0	+	Check tolerance	
Pressure hPa	: 560	†	cm3/1000s.	: +- 4.5
rack travel mm Tolerance mm	: 9.60 : ← 0.05	I	Spreed Tolerance	
TOTAL GIRCE MIN	0.03	Į	cm3/1000 strokes	: 6.0
Start interlock		+	Check tolerance	
		‡	cm3/1000s.	: 9.0
FUEL DELIVERY CHA	ARACTERISTICS			
Aneroid pressure		‡		
hPa	: 1600	+	End of test speci	fication sheet
Rated speed rpm	: 750	+	·	
Del. quantity cm3/1000 strokes	: 191.0	†		
CIND/ IUUU STPOKES	: 171.0	+		

Note remarks

Refer to Service Info for test and Adjustment instructions. See microcard(s) W400/...

Edition : 09.04.97 Test oil : ISO 4113

Combination No. : 0 402 076 801

Injection pump

Pump designation : PESSP120A132C/5RS337

: 2Y

EP type number : 0 412 026 793

Governor

Governer design. : RSV350...1050P1A641

Governer no. : 0 421 833 553

Cust. part No. : 1382923

Customer—spec. information Customer : SCANIA

Motor : DSI1172A,-C1157A

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Vibration damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 104

Opening pressure

bar : 251.5 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0
x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.45
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

Tolerance : \leftarrow 0.30

Check

tolerance *NW : + 0.50

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance *NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 16.75

Tolerance mm : +- 0.05

	+ Aneroid pressure
Del. quantity	hPa : 1500
cm3/1000 strokes : 263.0	Del. quantity
	cm3/1000 strokes : 263.0
Tolerance	Tolerance
cm3/1000 strokes : +- 1.0	- cm3/1000 strokes : +- 1.0
	Check tolerance
Check tolerance	+ cm3/1000s. : +- 4.0
cm3/1000s. : +- 4.0	Spreed
	Tolerance
Spreed	- cm3/1000 strokes : 8.0
,	Check tolerance
Tolerance	- cm3/1000s. : 12.0
cm3/1000 strokes : 8.0	1 12.0
	1
Check tolerance	
cm3/1000s. : 12.0	CONTROL LEVER
	-
	control lever
	position degree : 33.0
	tolerance degree : + 4.0
Rack travel in mm: 6.00	L core and degree
Tolerance mm : + 0.20	control lever
Del. quantity	position degree : 83.0
cm3/1000 strokes : 20.0	tolerance degree : +- 4.0
Tolerance	toterance degree 4.0
cm3/1000 strokes : - 4.0	
Check tolerance	ASSEMBLY GOVERNOR SETTING
cm3/1000S. : +- 6.0	T ASSEMBLI GOVERNOR SELLTING
Spreed -	Rated speed rpm : 750
Tolerance	rack travel mm : 15.70
cm3/1000 strokes : 5.0	rack travel mm : 13.70
	Dated and an 700
Check tolerance	Rated speed rpm : 788
cm3/1000s. : 9.0	Tolerance 1/min : + 4
•	rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP	T
WITH GOVERNOR	+ rack travel mm : 0.85 + Tolerance mm : + 0.55
WITH GOVERNOR	
•	Rated speed rpm : 850
	I
GUIDE SLEEVE POSITION	Rated speed rpm : 751
COIDE SECTAL LOSITION	rack travel in : 15.70
	I GON CIGACC HIII . IJ.(U
control lever	Rated speed rpm : 789
position degree : - 3	Tolerance 1/min : + 4
Rated speed rpm : 800	rack travel mm : 4.00
Mateu speed ipii . Ooo	Tack travet min . 4.00
Rack travel in mm: 0.50	rack travel mm : 0.85
Tolerance mm : + 0.20	Tolerance mm : + 0.55
	Rated speed rpm : 850
governor spring	Added Speed (pill . 050
pre-tension	1
click setting x : 2.00	Rated speed rpm : 752
COLOR SCEELING A . C.OU	Rated speed rpm : 752 rack travel mm : 15.70
	1 den ci daec iinii . 15.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 790
- ALL TONG ACTIVENT WILLOUD FOUND SIDE	Tolerance 1/min : +- 4
Rated speed rpm : 700	rack travel mm : 4.00
Rated speed rpm : 700	T TOUR LEGAVEL HIRIT : 4.00

rack travel mma Tolerance mm Rated speed rpm rack travel mm Rated speed rpm Tolerance 1/min rack travel mm rack travel mm rack travel mm Rated speed rpm Rated speed rpm Rated speed rpm	: + 0.55 : 850 : 753 : 15.70 : 791 : + 4 : 4.00 : 0.85	Pressure hPa : - Rated speed rpm : 500 rack travel mm : 13.50 Tolerance mm : +- 0.20 MEASUREMENT Rated speed rpm : 500 Pressure hPa : 295 rack travel mm : 14.30 Tolerance mm : +- 0.20 Pressure hPa : 640 rack travel mm : 16.00
Rated speed rpm rack travel mma Rated speed rpm	: 754 : 15.70	Tolerance mm : ← 0.05 Start interlock
Tolerance 1/min rack travel mm rack travel mm Tolerance mm Rated speed rpm	: + 4 : 4.00 : 0.85	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : - Rated speed rpm : 500 Dei. quantity cm3/1000 strokes : 188.0 Tolerance
Rated speed rpm rack travel mm Rated speed rpm Tolerance 1/min rack travel mm	: 15.70 : 793 : +- 4	cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0
rack travel mm rack travel mm Tolerance mm Rated speed rpm	: 0.85 : ← 0.55	STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 13.50 Tolerance mm : +- 0.20 Del. quantity cm3/1000 strokes : 140.0
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 16.75	Tolerance : + 20.0 Check tolerance cm3/1000s. : + 24.0
ANEROID/ALTITUDE COMPENSATOR TEST SETTING		End of test specification sheet
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 16.75 : + 0.05	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 08.04.97

Test oil

: ISO 4113

Combination No. : 0 402 076 816

Injection pump

Pump designation : PES6P120A720RS3340

EP type number : 0 412 026 773

Governor

Governer design. : RSV650...1100P8A566

: 5

Governer no.

: 0 421 833 601

Cust. part No. :

Customer-spec. information

Customer

: NH

Power KW

: 177.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C

40

Tolerance °C

2.0

Overflow valve : 2 417 413 086

Inlet press. bar : 1.5

Overflow quantity

min. l/h

120

Tolerance l/h: + 20.0

Test nozzle holde

assembly

: 1 688 901 103

Opening pressure

bar

208.5

Tolerance bar

: **←** 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter :

3.0

x length mm :

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar :

Tolerance bar : + 1.0

Prestroke mm

3.60

Tolerance mm

: - 0.05

Check

tolerance mm

: + 0.10

Rack travel in mm: 10.50

Tolerance mm

: +- 1.50

Firing order

: 1-5- 3- 6- 2-: 4

Fhasing

: 0-60-120-180-240

Tolerance

: +- 0.30

Check

tolerance *NW

: +- 0.50

Start of delivery blocking

Check

tolerance *NW

: +- 0.30

Barrel no. : 1

BASIC SETTING

	1
Rack travel in mm : 11.45 Tolerance mm : +- 0.05	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes : 159.0	Rated speed rpm : 1025 Aneroid pressure hPa : 1600
Tolerance cm3/1000 strokes : + 1.0	Del. quantity cm3/1000 strokes : 159.0
Check tolerance cm3/1000s. : + 6.0	Tolerance : + 1.0 Check tolerance
Spreed	+ cm3/1000s. : +- 6.0 + Spreed + Tolerance
Tolerance cm3/1000 strokes : 5.0	cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0
Check tolerance cm3/1000s. : 9.0	T (IIIS) 10003
	CONTROL LEVER
Rated speed rpm : 650	control lever position degree : 91.0
Rack travel in mm : 4.60 Tolerance mm : +- 0.10 Del. quantity	RATED SPEED
cm3/1000 strokes : 23.0 Tolerance	rack travel mm : 4.00 Rated speed rpm : 1100
cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 6.0	ASSEMBLY GOVERNOR SETTING
Spreed Tolerance cm3/1000 strokes : 8.0	Rated speed rpm : 1067 rack travel mm : 10.40
Check tolerance cm3/1000s. : 12.0	Rated speed rpm : 1097 Tolerance 1/min : + 5 rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP	+ rack travel mm : 0.85
WITH GOVERNOR	Tolerance mm : + 0.55 Rated speed rpm : 1250
GUIDE SLEEVE POSITION	Rated speed rpm : 1068 rack travel mm : 10.40
control lever position degree : - 3 Rated speed rpm : 800	Rated speed rpm : 1098 Tolerance 1/min : + 5 rack travel mm : 4.00
Rack travel in mm: 0.50 Tolerance mm: + 0.20	rack travel mm : 0.85 Tolerance mm : + 0.55
<pre>governor spring pre-tension click setting x : 2.25</pre>	Rated speed rpm : 1069 rack travel mm : 10.40
	Rated speed rpm : 1099

_, _, _, _, _,	,
Tolerance 1/min : + 5	†
rack travel mm : 4.00	
	+ TORQUE CONTROL
rack travel mm : 0.85	†
Tolerance mm : + 0.55	+ Rated speed rpm : 1025
	rack travel mm : 11.45
2000	† Tolerance mm : +- 0.05
Rated speed rpm : 1070	†
rack travel mm : 10.40	+ Rated speed rpm : 800_
~	rack travel mm : 12.30 Tolerance mm : + 0.10
Rated speed rpm : 1100	† Tolerance mm : + 0.10
Tolerance 1/min : + 5	†
rack travel mm : 4.00	+ Rated speed rpm : 700
	† rack travel mm : 12.35
rack travel mm : 0.85	+ Tolerance mm : +- 0.15
Tolerance mm : <- 0.55	†
	+ ANEROID/ALTITUDE
Rated speed rpm : 1071 rack travel mm : 10.40	+ COMPENSATOR TEST
rack travel mm : 10.40	†
	†
Rated speed rpm : 1101	+ SETTING
Tolerance 1/min : + 5	†
reck travel mm : 4.00	+ Rated speed rpm : 500
	+ Pressure hPa : 1600
rack travel mm : 0.85	† rack travel mm : 12.30
Tolerance num : - 0.55	† Tolerance mm : → 0.15
	†
	+ Pressure hPa : - + Rated speed rpm : 500
Rated speed rpm : 1072	
rack travel mm : 10.40	+ rack travel mm : 7.80 → Tolerance mm : → 0.15
	f Tolerance mm : → 0.15
Rated speed rpm : 1102	+
Tolerance 1/min : +- 5	+ MEASUREMENT
rack travel mm : 4.00	+
	+ Rated speed rpm : 500
rack travel mm : 0.85	†
Tolerance mm : \leftarrow 0.55	† Pressure hPa : 1050
	† rack travel mm : 11.50
LOW IDLE	†
	† Start interlock
	†
control lever	+ Rated speed rpm :> 100
position degree : 74.0	† ,
	+ Check
Setting point w/out bumper spr	ing + speed 1/min : > 80
	†
Rated speed rpm : 650	F1 (F1) P(1) (F1) (F1) (F1)
rack travel mm : 4.10	† FUEL DELIVERY CHARACTERISTICS
Tolerance mm : \leftarrow 0.10	† * ***********************************
	Aneroid pressure
Testing:	+ hPa : 1600
named associated (FO	Rated speed rpm : 800
Rated speed rpm : 650	Del. quantity
rack travel mm : 4.60	+ cm3/1000 strokes : 185.0
Tolerance mm : +- 0.10	† Tolerance
	+ cm3/1000 strokes : + 3.0
rack travel mm : 2.00	+ Check tolerance
Rated speed rpm : 700	+ cm3/1000s. : +- 6.0

Aneroid pressure

hPa : Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 86.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : \leftarrow 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50

Del. quantity

cm3/1000 strokes : 140.0

Tolerance

cm3/1000 strokes : \leftarrow 15.0

Check tolerance

cm3/1000s. : + 19.0

LOW IDLE

Rated speed rpm : 650

Del. quantity

cm3/1000 strokes : 23.0

Tolerance

cm3/1000 strokes : \leftarrow 3.0

Check tolerance

cm3/1000s. : +- 6.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 07.04.97 Test oil : ISO 4113

Combination No. : 0 402 670 812

Injection pump

Pump designation : PE12P120A320LS7902

EP type number : 0 412 620 848

Governor

Governer design. : RSV350...1050POA662

Coverner no. : 0 421 833 579

Cust. part No. : 027 074 4302

Customer-spec. information Customer : MB-NFZ : OM 444 LA Motor Power KW : 448.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 077

Inlet press. bar : 1.5

Overflow quantity

min. L/h : 110 Tolerance L/h : + 10.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0 x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.25 Tolerance mm : + 0.05

Check

tolerance mm: \leftarrow 0.10

Rack travel in mm: 20.50 : +- 0.50 Tolerance mm

: 12- 1- 5- 9- 8 Firing order

: - 4- 11- 10- 2 : - 7

: 0-45-60-105-120 Phasing

: -180-225-240-285

: -345

: **←** 0.30 Tolerance

Check

: +- 0.50 tolerance 'NW

Start of delivery mark

: **←** 0.10 Tolerance

Check

tolerance *NW : +- 0.75

Barrel no. : 12

BASIC SETTING

	1
Rack travel in mm: 13.40	
Tolerance mm : + 0.05	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes : 199.0	Rated speed rpm : 1030 Aneroid pressure hPa : 1250
Tolerance cm3/1000 strokes : + 1.0	Del. quantity cm3/1000 strokes : 199.0 Tolerance
Check tolerance cm3/1000s. : + 4.0	cm3/1000 strokes : +- 1.0 Check tolerance
Spreed	cm3/1000s. : +- 4.0 Spreed
Tolerance - cm3/1000 strokes : 5.0 -	Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0
Check tolerance cm3/1000s. ; 9.0 -	
	CONTROL LEVER
Rated speed rpm : 350	control lever position degree : 94.0
Rack travel in mm: 6.20 - Tolerance mm: + 0.10 - Del. quantity -	tolerance degree : +- 4.0
cm3/1000 strokes : 19.0 - Tolerance -	ASSEMBLY GOVERNOR SETTING
cm3/1000 strokes : + 3.0 - Check tolerance - cm3/1000s. : + 6.0	Rated speed rpm : 1070 - rack travel mm : 13.50
Spreed - Tolerance -	Rated speed rpm : 1145 Tolerance 1/min : + 4
cm3/1000 strokes : 8.0 - Check tolerance -	rack travel mm : 4.00
cm3/1000s. : 12.0	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1350
(B) SETTING OF INJECTION PUMP - WITH GOVERNOR -	
	Rated speed rpm : 1071 rack travel mm : 13.50
GUIDE SLEEVE POSITION	Rated speed rpm : 1146 Tolerance 1/min : +- 4 rack travel mm : 4.00
control lever - 3 - Rated speed rpm : 800 -	rack travel mm : 0.85 Tolerance mm : + 0.55
Rack travel in mm: 0.50	
Tolerance mm : + 0.20	Rated speed rpm : 1072 rack travel mm : 13.50
governor spring - pre-tension - click setting x : 4.00 -	Rated speed rpm : 1147 Tolerance 1/min : + 4
	rack travel mm : 4.00

rack travel mm Tolerance mm		rack travel mm	: 2.00
Rated speed rpm rack travel mma	: 1073 : 13.50	TORQUE CONTROL	45-5
Rated speed rpm Tolerance 1/min rack travel mm	; 4	Rated speed rpm rack travel mm Tolerance mm	: 13.40 : ← 0.05
rack travel mm Tolerance mm		Rated speed rpm rack travel mm Tolerance mm	: 800 : 13.40 : ← 0.10
Rated speed rpm rack travel mm	: 1074 : 13.50	ANEROID/ALTITUDE COMPENSATOR TEST	
Rated speed rpm Tolerance 1/min rack travel mm	: +- 4	SETTING	
rack travel mm Tolerance mm Rated speed rpm	: ← 0.55	Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1250 : 1.60
Rated speed rpm rack travel mm		Pressure hPa Rated speed rpm MEASUREMENT	: - : 500
Rated speed rpm Tolerance 1/min rack travel mm	: +- 4	Rated speed rpm	
rack travel mm Tolerance mm		+ Pressure hPa + rack travel mm + Tolerance mm	: 0.80
LOW IDLE		+ Start interlock	
control lever position degree tolerance degree Testing:		FUEL DELIVERY CHA	RACTERISTICS : 1250 : 800
Reted speed rpm rack travel mm Tolerance mm	: 350 : 6.20 : + 0.10	Del. quantitycm3/1000 strokesTolerancecm3/1000 strokes	
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 405	Check tolerance cm3/1000s. Spreed Tolerance	: ← 6.0
Rated speed rpm		cm3/1000 strokes Check tolerance cm3/1000s.	: 8.0 : 12.0
CRT mm min. SET IDLE AUXILIAN	: > 9.30	Aneroid pressure	• -
OC! TACK WONTETUL	VI OLIVATIO	i ii a	•

Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 162.0 Tolerance cm3/1000 strokes : +-1.0 Check tolerance cm3/1000s. 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 14.50 Tolerance mm : + 0.15 Del. quantity cm3/1000 strokes : 160.0 Tolerance cm3/1000 strokes : + 15.0 Check tolerance cm3/1000s. : + 19.0

LOW IDLE

Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 19.0 Tolerance cm3/1000 strokes : ← 3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 03.04.97 Test oil : ISO 4113

Combination No. : 0 402 676 825

Injection pump

Pump designation : PE6P120A320RS7430 EP type number : 0 412 626 960

Governor

Governer design. : RSV300...850P1A614 Governer no. : 0 421 833 502

Cust. part No. : 11031231 P05 v.03/97

Customer-spec. information

Customer : VCE : TD 103 KAE Motor

Power KW : 190.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration damper

(RoBo diaphragm) : 4.2

Test oil inlet

temp. °C 40 Tolerance *C : ← 2.0

Overflow valve : 2 417 413 078

2.5 Inlet press. bar : Tolerance bar : + 0.1

Overflow quantity

min. L/h : 300 Tolerance L/h : +- 20.0

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

: 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.25 Tolerance mm : + 0.05

Check

: +- 0.10 tolerance mm

Rack travel in mm : 11.00 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 : +- 0.30 Phasing

Tolerance

Check

tolerance *NW : +- 0.50

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 500

Rack travel in mm : 12.20 Tolerance mm : + 0.05

1	Aneroid pressure
Del. quantity	hPa : 1500
cm3/1000 strokes : 306.0	Del. quantity
	cm3/1000 strokes : 306.0
Tolerance	Tolerance
cm3/1000 strokes : + 1.0	cm3/1000 strokes : + 1.0 Check tolerance
Check tolerance	cm3/1000s. : +- 4.0
cm3/1000s. : + 4.0	Spreed
	Tolerance
Spreed	cm3/1000 strokes : 7.0
Tolonoo	Check tolerance
Tolerance + cm3/1000 strokes : 7.0 +	cm3/1000S. : 11.0
7.000 3610/683 . 7.0	
Check tolerance	
cm3/1000s. : 11.0	CONTROL LEVER
	and a laborate
1	control lever position degree : 52.0
Rated speed rpm : 325	tolerance degree : +- 4.0
+	to to tariot degree to the pro-
Rack travel in mm: 4.20	control lever
Tolerance mm : + 0.10	position degree : 102.0
Del. quantity + cm3/1000 strokes : 34.0 +	tolerance degree : +- 4.0
Tolerance	RATED SPEED
cm3/1000 strokes : +- 3.0	rack travel mm : 10.80
Check tolerance	Rated speed rpm : 875
cm3/1000s. : +- 6.0	Tolerance 1/min : +- 5
Spreed	
Tolerance + cm3/1000 strokes : 5.0 +	rack travel mm : 4.00 Rated speed rpm : 950
Check tolerance	Rated speed rpm : 950 Tolerance 1/min : +- 15
cm3/1000s. : 8.0	Total diluc Trimini
+	rack travel mm : 0.85
	Tolerance mm : + 0.55
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 1100
WITH GOVERNOR	
I	
·	
GUIDE SLEEVE POSITION +	LOW IDLE
†	
control lever	control lever
position degree : -3	position degree : 76.0
Rated speed rpm : 800	tolerance degree : + 4.0
†	
Rack travel in mm: 0.50 + Tolerance mm: : + 0.20 +	control lever
Tolerance mm : + 0.20	position degree : 26.0 tolerance degree : + 4.0
governor spring	toterance degree . F- 4.0
pre-tension +	Setting point w/out bumper spring
click setting x : 6.00	
†	Rated speed rpm : 325
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 3.70 Tolerance mm : + 0.10
TOLL LOND DELIVERY AT FULL EVAN STOP	Total arise Half . To U. IU
Rated speed rpm : 500	Testing:
•	•

Rated speed rpm	• 325
rack travel mm	. /20
rack travel mm Tolerance mm	. 4.20
roterance nan	: - 0.10
rack travel mm	: 2.00
Rated speed rom	: 420
Tolerance 1/min	: +- 30
rack travel mm Rated speed rpm Tolerance 1/min	50
TORQUE CONTROL	
Rated speed rpm	• 500
rack traval mm	• 12 20
rack travel mm Tolerance mm	0.05
roter carre han	, 0,05
Rated speed rpm	: 700
rack travel mm	: 11.80 : +- 0.10
Tolerance mm	: ← 0.10
Rated speed rpm rack travel mm Tolerance mm	: 570
rack travel mm	: 12.00
Tolerance mm	: ← 0.10
Rated speed rpm	: 500
rack travel mm	: 12.50
Tolerance mm	: ← 0.10
COMPENSATOR TEST	
SETTING	
	: 500
Rated speed rpm Pressure hFa	: 500 : 1500
Rated speed rpm Pressure hFa rack travel mm	: 12.20
	: 500 : 1500 : 12.20 : ← 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 12.20
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 12.20 : + 0.05 : -
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm	: 12.20 : ← 0.05 : - : 500
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm	: 12.20 : ← 0.05 : – : 500 : 9.35
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 12.20 : ← 0.05 : - : 500
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 12.20 : ← 0.05 : – : 500 : 9.35
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 12.20 : ← 0.05 : – : 500 : 9.35
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm	: 12.20 : + 0.05 : - : 500 : 9.35 : + 0.20
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm	: 12.20 : + 0.05 : - : 500 : 9.35 : + 0.20 : 500 : 575
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm	: 12.20 : + 0.05 : - : 500 : 9.35 : + 0.20
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 12.20 : + 0.05 :
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 12.20 : + 0.05 :
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: 12.20 : + 0.05 : - : 500 : 9.35 : + 0.20 : 575 : 2.35 : + 0.20 : 180 : 0.25
Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa Rated speed rpm Tolerance mm MEASUREMENT Rated speed rpm Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm	: 12.20 : + 0.05 :
Tolerance mm Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 12.20 : + 0.05 : - : 500 : 9.35 : + 0.20 : 575 : 2.35 : + 0.20 : 180 : 0.25

FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity	: 1500 : 700
cm3/1000 strokes Tolerance	: 264.0
cm3/1000 strokes Check tolerance	: +- 1.0
cm3/1000s. Spreed Tojerance	: + 4.0
cm3/1000 strokes Check tolerance	: 10.0
cm3/1000s.	: 14.0
Aneroid pressure hPa Rated speed rpm Del. quantity	: - : 700
cm3/1000 strokes Tolerance	: 198.0
cm3/1000 strokes Check tolerance	: ← 1.0
cm3/1000s.	: +- 4.0

LOW I	DLE	
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Rated speed rpm	: 3	325
Del. quantity		
cm3/1000 strokes	:	34.0
Tolerance		
cm3/1000 strokes	: +-	3.0
Check tolerance		
cm3/1000s.	: +-	6.0
Spreed		
Tolerance		
cm3/1000 strokes	:	5.0
Check tolerance		
cm3/1000S.	:	8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 07.04.97 Test oil : ISO 4113

Combination No. : 0 402 678 827

Injection pump

Pump designation : PE8P120A320LS7886 EP type number : 0 412 628 903

Governor

Governer design. : RSV550...850P0A574 Governer no. : 0 421 833 476

Cust. part No. : 0260741102

Customer—spec. information Customer : MB-NFZ Motor : CM442LA Power KW : 329.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0
Tolerance bar : + 0.1

Overflow quantity

min. l/h : 120 Tolerance l/h : +- 10.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : +- 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.05
Tolerance mm : + 0.05
Check

Rack travel in mm : 20.50
Tolerance mm : +- 0.50

tolerance run : - 0.10

Firing order : 8-7-2-6-3

: - 4- 1

Phasing : 0-45-90-135-180

: -270-315 Tolerance : + 0.30

Check

tolerance *NW : +- 0.50

Start of delivery mark

Tolerance : + 0.10

Check

tolerance *NW : + 0.75

Barrel no. : 8

BASIC SETTING

Rated speed rpm : 830

	4
Rack travel in mm : 15.40 Tolerance mm : + 0.05	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes : 264.0	Rated speed rpm : 830 Aneroid pressure
Tolerance cm3/1000 strokes : + 1.0	hPa : 1200 Del. quantity cm3/1000 strokes : 264.0
Check tolerance cm3/1000s. : + 4.0	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Spreed	+ cm3/1000s. : +- 4.0 + Spreed + Tolerance
Tolerance cm3/1000 strokes : 6.0	- cm3/1000 strokes : 6.0 - Check tolerance - cm3/1000s. : 9.0
Check tolerance cm3/1000s. : 9.0	- CHE/10003 9.0
	CONTROL LEVER
Rated speed rpm : 550	control lever position degree : 80.0
Rack travel in mm : 3.90 Tolerance mm : + 0.10 Del. quantity	tolerance degree : +- 4.0
cm3/1000 strokes : 19.0 Tolerance	ASSEMBLY GOVERNOR SETTING
<pre>cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0</pre>	Rated speed rpm : 870 rack travel mm : 14.40
Spreed Tolerance	Rated speed rpm : 920 Tolerance 1/min : +- 4
cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 10.0	rack travel mm : 4.00
	+ rack travel mm : 0.85 + Tolerance mm : + 0.55 + Rated speed rpm : 1050
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	+
	Rated speed rpm : 871 rack travel mm : 14.40
GUIDE SLEEVE POSITION	Rated speed rpm : 921 Tolerance 1/min : + 4 rack travel mm : 4.00
control lever position degree : - 3 Rated speed rpm : 800	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1050
Rack travel in mm : 0.50	Rated speed rpm : 1050
Tolerance mm : + 0.20 governor spring	Rated speed rpm : 872 rack travel mm : 14.40
pre-tension click setting x : 2.00	Rated speed rpm : 922 Tolerance 1/min : + 4
	+ rack travel mm : 4.00

rack travel mm Tolerance mm Rated speed rpm Rated speed rpm rack travel mm Rated speed rpm Tolerance 1/min rack travel mm	: 1050 : 873 : 14.40 : 923 : +- 4 : 4.00 : 0.85	CRT mm min. : > 19.00 SET IDLE AUXILIARY SPRING rack travel mm : 2.00 TORQUE CONTROL Rated speed rpm : 830 rack travel mm : 15.40 Tolerance mm : + 0.05 Rated speed rpm : 600
Tolerance man Rated speed rpm Rated speed rpm rack travel man	: 874	rack travel mm : 15.40 Tolerance mm : + 0.10 ANEROID/ALTITUDE
Rated speed rpm Tolerance 1/min rack travel mm	: 924 : +- 4	COMPENSATOR TEST SETTING
rack travel mm Tolerance mm Rated speed rpm	: 0.85 : +- 0.55 : 1050	Rated speed rpm : 500 Pressure hPa : 1200 rack travel mm : 15.40 Tolerance mm : + 0.10
Rated speed rpm rack travel mm Rated speed rpm Tolerance 1/min	: 14.40 : 925 : + 4	Pressure hPa : - Rated speed rpm : 500 rack travel mm : 9.30 Tolerance mm : + 0.20
rack travel mm rack travel mm Tolerance mm Rated speed rpm	: 0.85 : ← 0.55	HEASUREMENT Rated speed rpm : 500 Pressure hPa : 500 rack travel mm : 11.35
LOW IDLE control lever position degree	: 66.0	Tolerance mm : + 0.20 Pressure hPa : 710 rack travel mm : 13.30 Tolerance mm : + 0.20
tolerance degree Testing:		Start interlock
Rated speed rpm rack travel mm Tolerance mm rack travel mm	: 550 : 3.90 : + 0.10 : 2.00	FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa : 1200 Rated speed rpm : 600
Rated speed rpm Tolerance 1/min Rated speed rpm	: 560 : +- 30 : 100	+ Del. quantity + cm3/1000 strokes : 283.0 + Tolerance + cm3/1000 strokes : +- 3.0

Check tolerance	
cm3/1000s. Spreed	: +- 6.0
Tolerance	
	: 8.0
Check tolerance cm3/1000s.	: 12.0
Aneroid pressure hPa	• _
Rated speed rpm	500
Del. quantity cm3/1000 strokes	: 155.0
Tolerance	. 133.0
cm3/1000 strokes	: +- 1.0
Check tolerance	: +- 4.0
Spreed	
Tolerance tm3/1000 strokes	: 8.0
Check tolerance	
cm3/1000s.	: 12.0
STARTING FUEL DEL	TVERY
Rated speed rpm Del. quantity	: 100
m3/1000 strokes	: 275.0
olerance m3/1000 strokes	: +- 15.0
Check tolerance	: +- 15.0
:m3/1 00 0s.	: ← 19.0
OW IDLE	
Rated speed rpm	: 550
el. quantity	
:m3/1000 strokes Tolerance	: 19.0
cm3/1000 strokes	: ← 3.0
Check tolerance cm3/1000s.	: +- 6.0
preed	
olerance m3/1000 strokes	: 6.0
heck tolerance	: 6.0
m3/1000s.	: 10.0
nd of test speci	fication sheet
•	

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

Edition : 07.04.97 : ISO 4113 Test oil

Combination No. : 0 402 698 033

Injection pump

Pump designation : PE8H120/320LS15 EP type number : 0 412 628 004

Governor

Governer design. : RE36

Governer no. : 0 421 890 369

Cust. part No. : 0250745602

Customer-spec. information : MB-NF7 Customer

Motor : OM 442 LA

TEST BENCH REQUIREMENTS

Inlet line : 3.2 ELAB

Test oil inlet

temp. °C Tolerance °C 2.0

Overflow valve : 2 417 413 082

3.0 Inlet press. bar : Tolerance bar : +- 0.1

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

208.5 bar Tolerance bar : **←** 1.5

: 1 680 750 089 Test lines

Outside diameter : 8.0 x inside diameter : 3.0 x length mm : 600

REMARKS

Pump-specific values in Section (B) must be observed!

(A) INJECTION PUMP SETTINGS No basic setting.

Setting of constant delivery

under Section C.

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

7.00 Prestroke mm : +- 0.05 Tolerance mm

Check

tolerance mm : **←** 0.10

Rack travel in mm: 10.50 Tolerance mm : \leftarrow 0.50

Firing order : 8-7-2-6-3

: - 4- 1

: -270-315

: 0-45-90-135-180 Phasing

Tolerance : + 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Start of delivery mark

Tolerance : **←** 0.50

Check

tolerance *NW : **←** 0.75

Barrel no. 8

(B) POSITIONER TESTING Warm-up time: 3 minutes at n=600 min-1, Uact = 2.5 V

	<u></u>
-	- Test with control rod
TESTING & SETTING RACK TRAVEL SENSOR	in stop position
POSITION	
Fundan annud mår da o	Engine speed min-1: 60
Engine speed min-1: 0	Amplitude V : 1.4 Tolerance V : +/- 0.6
Setting point	Check
(P, R and H pump)	tolerance V : +/- 1.20
	- cocciditor
Uect V : 3.100 - CRT mm : 13.00 -	Engine speed min-1: 600
	Difference
Tolerance mm : +/- 0.05	- Amplitude to
Check - tolerance mm : +/- 0.10 -	Amplitude V : max.1.4
coterance min : 4/4 0.10	
Check value	
(P, R and H pump)	(C) INJECTION PUMP WITH POSITIONER
-	
1 700	- TEST POINT V1
Lact V : 1.700 - CRT mm : 6.15 -	Poted speed see 350
Tolerance mm : +/- 0.25	- Rated speed rpm : 750 - Uact V : 2.800
Check	- Uact V : 2.800 - Prestroke solenoid
tolerance mm : +/- 0.30	Stroke mm : 7.40
-	Del. quantity
_	- cm3/1000 strokes : 345.0
Setting point -	Tolerance
(M pump)	cm3/1000 strokes : +- 2.0
Uect V : 3.100	Check tolerance : +- 6.0
Uect V : 3.100 - CRT mm : 12.50 -	Spreed
Tolerance mm : +/- 0.05	- Tolerance
Check	- cm3/1000 strokes : 5.0
tolerance mm : +/- 0.10 -	- Check tolerance
	- cm3/1000s. : 9.0
Check value	FUEL DEL TUEDY GUADAGTED TOTAGE
(M pump)	FUEL DELIVERY CHARACTERISTICS
Uact V : 1.700	- Rated speed rpm : 950
CRT mm : 5.50	- Uact V : 2.900
Tolerance mm : +/- 0.25	- Prestroke solenoid
Check -	Stroke mm : 8.00
tolerance mm : +/- 0.30 -	Del. quantity
Step popition	- cm3/1000 strokes : 335.0 - Tolerance
Stop position -	- roterance - cm3/1000 strokes : +- 3.0
Uact V : Value with	- Check tolerance
deenergised adjusting magnet	- cm3/1000s. : +- 6.0
and control rod in	-
stop position.	- Rated speed rpm : 550
CRT mm : 0.75	- Uact V : 2.700
Tolerance mm : +/- 0.25	Prestroke solenoid
Check tolerance mm : +/~ 0.35	- Stroke mm : 9.50 - Del. quantity
total differing	- cm3/1000 strokes : 354.0
	- Tolerance
ENGINE-SPEED SENSOR	- cm3/1000 strokes : + 3.0
(All P and R pumps not	- Check tolerance
H and M pumps)	- cm3/1000s. : +- 6.0

Rated speed rpm		30	
Uact V		.000	
Prestroke solenoi Stroke mm		5.30	
Del. quantity	. 20	05.0	
cm3/1000 strokes Tolerance	: 20	05.0	
cm3/1000 strokes	: +-	2.5	
Check tolerance cm3/1000S.	: +-	5.0	
TEST POINT L1			
Rated speed rpm		00	
Uact V Tolerance Volt	: + 0.	. 500 . 060	
Check tolerance			
Volt Prestroke solenoi	; +− 0.	. 0 60	
Stroke mm		3.00	
Del. quantity cm3/1000 strokes	: 3	35.0	
Tolerance			
cm3/1000 strokes Spreed	: +	3.0	
Tolerance			
cm3/1000 strokes Check tolerance	:	8.0	
cm3/1000s.	: 1	12.0	
STARTING FUEL DELIVERY			
Rated speed rpm		00	
Uact V		900	
Prestroke solenoi		0.00	
Stroke mm Del. quantity	: 10	0.00	
cm3/1000 strokes	: 11	3.0	
Tolerance			
cm3/1000 strokes	: + 1	0.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 07.04.97 : ISO 4113

Combination No. : 0 402 736 892

Injection pump

Pump designation : PES6P120A120RS7400

EP type number : 0 412 726 950

Governor

Governer design. : RQV350...1100PA1244

: 1K

Governer no.

: 0 421 815 488

Cust. part No. : 3282610

Customer-spec. information Customer : CUMMINS Motor : 6CTAA Power KU : 221.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 1.5

Overflow quantity

min. l/h : 100 Tolerance l/h : +- 20.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.30 Tolerance mm : +- 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 20.50 Tolerance mm : \leftarrow 0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: + 0.30 Tolerance

Check

tolerance *NW : + 0.50

Start of delivery blocking

*NW after s.o.d. : 8.00 : +- 0.50 Tolerance

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm: 15.30

Tolerance mm : + 0.05	🕂 guide sleeve
	travel mm : 4.33
Del. quantity	Tolerance mm : + 0.25
cm3/1000 strokes : 209.0	1 000 4100 1111
	Rated speed rpm : 1380
Tolerance	guide sleeve
cm3/1000 strokes : +- 1.0	travel mm : 13.50
CHD/1000 Strokes . += 1.0	
Check tolerance	Tolerance mm : + 0.50
	T
cm3/1000s. : \leftarrow 4.0	CUIDE OF SELECTION
Chand	GUIDE SLEEVE POSITION
Spreed	†
Talanasa	†
Tolerance	t control lever
cm3/1000 strokes : 5.0	position degree : - 1
	+ Rated speed rpm : 1200
Check tolerance	†
cm3/1000s. : 9.0	+ Rack travel in mm : 14.30
erganya sanahili bermananganya sanahiri mani sanaha salama, salahiri mperi sa	+ Tolerance mm : + 2.00
	†
Rated speed rpm : 350	+ FULL LOAD DELIVERY AT FULL LOAD STOP
	+
Rack travel in mm: 5.40	+ Rated speed rpm : 1100
Tolerance mm : + 0.10	+ Aneroid pressure
Del. quantity	+ hPa : 1500
cm3/1000 strokes : 25.0	+ Del. quantity
Tolerance	+ cm3/1000 strokes : 209.0
cm3/1000 strokes : +- 3.0	Tolerance
Check tolerance	cm3/1000 strokes : +- 1.0
cm3/1000s. : +- 5.0	- Check tolerance
Spreed	cm3/1000s. : +- 4.0
Tolerance	Spreed
cm3/1000 strokes : 7.0	Tolerance
Check tolerance	- cm3/1000 strokes : 5.0
an3/1006s. : 11.0	- Check tolerance
**************************************	cm3/1000s. : 9.0
	1 11137 10003.
(B) SETTING OF INJECTION PUMP	I
WITH GOVERNOR	
WITH GOVERNOR	CONTROL LEVER
	T CONTROL LEVER
GUIDE SLEEVE TRAVEL	control lever
AOTHE SPEEAS INVASE	l .
Rated speed rom : 1159	position degree : 66.0
and the second s	tolerance degree : +- 4.0
guide sleeve : 10.28	I control loves
	control lever
Tolerance mm : + 0.15	position degree : 120.0
	tolerance degree : +- 4.0
Rated speed rpm : 350	1
guide sleeve	RATED SPEED
travel mm : 1.93	rack travel mm : 14.30
Tolerance mm : + 0.20	Rated speed rpm : 1145
740	Tolerance 1/min : + 5
Rated speed rpm : 710	†
guide sleeve	rack travel mm : 4.00
travel mm : 5.80	→ Sated speed rpm : 1255
Tolerance mm : + 0.25	Tolerance 1/min : + 15
	Check
Rated speed rpm : 430	+ speed 1/min : +- 20

rack travel mm Tolerance mm Rated speed rpm	: 0.50 : + 0.50 : 1350
LOW IDLE	
control lever position degree tolerance degree	: 73.0 : + 4.0
control lever position degree tolerance degree	: 20.0 : ← 4.0
Testing:	
Rated speed rpm rack travel mm Tolerance 8m	: 350 : 5.40 : + 0.10
Rated speed rpm	: 250
CRT mm min.	: > 8.30
Rated speed rpm	: 350
TORQUE CONTROL	
Rated speed rpm rack travel nm Tolerance mm	: 1100 : 15.30 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 750 : 14.90 : ← 0.10
Rated speed rpm rack travel mm Tolerance mm	: 900 : 15.25 : ← 0.15
Rated speed rpm rack travel mm Tolerance mm	: 600 : 14.80 : ← 0.15
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm	: 1100 : 1500 : 15.30

Tolerance mm	: +- 0.05
Pressure hPa Rated speed rpm rack travel mm Tolerance mm	: - : 1100 : 11.00 : +- 0.20
MEASUREMENT	
Rated speed rpm	: 1100
Pressure hPa rack travel mm Tolerance mm	: 900 : 14.50 : + 0.20
Pressure hPa rack travel mm Tolerance mm	: 400 : 11.85 : +- 0.05
Start interlock	
Rated speed rpm Rated speed rpm	: > 100 : < 290
Check speed 1/min Check	: > 80
speed 1/min	: < 300
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	
Aneroid pressure hPa Rated speed rpm	: 1500
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 1500 : 750
Aneroid pressure hPa Rated speed rpm Del. quantity	: 1500 : 750 : 198.0 : + 3.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: 1500 : 750 : 198.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: 1500 : 750 : 198.0 : + 3.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: 1500 : 750 : 198.0 : + 3.0 : + 6.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance	: 1500 : 750 : 198.0 : + 3.0 : + 6.0 : 12.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm	: 1500 : 750 : 198.0 : + 3.0 : + 6.0 : 12.0 : 16.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa	: 1500 : 750 : 198.0 : + 3.0 : + 6.0 : 12.0 : 16.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 1500 : 750 : 198.0 : + 3.0 : + 6.0 : 12.0 : 16.0 : 500 : 111.0 : + 2.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 1500 : 750 : 198.0 : + 3.0 : + 6.0 : 12.0 : 16.0 : 500 : 111.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 1500 : 750 : 198.0 : + 3.0 : + 6.0 : 12.0 : 16.0 : 500 : 111.0 : + 2.0 : + 4.0

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 195.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 24.0

LOW IDLE

Rated speed rpm : 350 Del. quantity cm3/1000 strokes : 25.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 5.0 Spreed Toterance cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. 11.0

Note remarks

Refer to Service Info for test and adjustment instructions.

See microcard(s) W400/...

: 07.04.97 : ISO 4113 Edition Test oil

Combination No. : 0 402 736 893

Injection pump

Pump designation : PES6P120A120RS7400

EP type number : 0 412 726 950

Governor

Governer design. : RQV350...1100FA1244

: 2K

Governer no. : 0 421 815 489

Cust. part No. : 3282609

Customer-spec. information Customer : CUMMINS Motor

: 6CTAA : 206.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 1.5

Overflow quantity

min. l/h : 125 Tolerance l/h : + 20.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.30 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 20.50 Tolerance mm : \leftarrow 0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240 Tolerance : +- 0.30

Check

tolerance "NW : + 0.50

Start of delivery blocking

*NW after s.o.d. : 8.00

Tolerance : \leftarrow 0.10

Check

tolerance *NW : +- 0.75

Barrel no. : 1

BASIC SETTING

		4
Rack travel in mm		Rated speed rpm : 500
Tolerance mm	: ← 0.05	guide steeve
Del. quantity		+ travel mm : 4.70 + Tolerance mm : +- 0.25
cm3/1000 strokes	: 211.0	Toterance min : 7- 0.25
CILDY 1000 SCI OKES	. 211.0	Rated speed rpm : 1380
Tolerance		+ Rated speed rpm : 1380 + guide steeve
cm3/1000 strokes	: +- 1.0	travel mm : 13.50
CILDY 1000 SCIOKES	· — 1.0	+ Tolerance mm : + 0.50
Check tolerance		T Toterance min : +- 0.50
cm3/1000s.	: +- 4.0	I
CIRC) 10000:	4.0	GUIDE SLEEVE POSITION
Spreed		GOIDE SEEEVE POSITION
JP. CCG		1
Tolerance		- control lever
cm3/1000 strokes	: 5.0	position degree : - 1
	. 5.5	+ Rated speed rpm : 1215
Check tolerance		The construction of the co
cm3/1000s.	: 9.0	Rack travel in mm: 13.30
		+ Tolerance mm : +- 2.00
		1
Rated speed rpm	: 350	+ FULL LOAD DELIVERY AT FULL LOAD STOP
		+
Rack travel in mm		+ Rated speed rpm : 1050
Tolerance mm	: +- 0.10	+ Aneroid pressure
Del. quantity		+ hPa : 1500
cm3/1000 strokes	: 25.0	+ Del. quantity
Tolerance		+ cm3/1G00 strokes : 211.0
	: 3.0	+ Tolerance
Check tolerance		+ cm3/1000 strokes : +- 1.0
cm3/1000s.	: +- 5.0	+ Check tolerance
Spreed		+ cm3/1000s. : +- 4.0
Tolerance		+ Spreed
cm3/1000 strokes	: 7.0	+ Tolerance
Check tolerance		+ cm3/1000 strokes : 5.0
cm3/1000s.	: 11.0	+ Check tolerance
		+ cm3/1900s. : 9.0
'D\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	11-0-7-011	†
(B) SEITING OF IN	JUECTION PUMP	†
WITH GOVERNOR		CONTROL LEVER
		T CONTROL LEVER
GUIDE SLEEVE TRAV	/FI	T control lever
GOIDE SPEEKE IKWA	LL	+ position degree : 66.0
Rated speed rpm	: 1159	+ tolerance degree : + 4.0
guide steeve	; 1139	toterance degree : +- 4.0
travel mm	: 10.28	T control lever
Tolerance mm	: +- 0.15	position degree : 122.0
TOTE ALTE MAN	0.13	tolerance degree : + 4.0
Rated speed rpm	: 350	total alice degree . +- 4.0
guide sleeve	. 550	T RATED SPEED
travel mm	: 1.93	rack travel mm : 14.50
Tolerance mm	: +- 0.20	Rated speed rpm : 1145
COLCIGING HIM	0.20	+ Tolerance 1/min : +- 5
Rated speed rpm	: 710	Total and Triming 1
guide sleeve	. , 10	rack travel mm : 4.00
travel mm	: 5.79	+ Rated speed rpm : 1260
Tolerance mm	: + 0.25	+ Tolerance 1/min : + 15
Oterance nam	. += 0.63	T lorer aure min : 12

Check speed 1/min rack travel mm Tolerance mm Rated speed rpm	: + 0.50 }	Pressure hPa : - Rated speed rpm : 1050 rack travel mm : 11.05 Tolerance mm : +- 0.20 MEASUREMENT Rated speed rpm : 1050
LOW IDLE		Pressure hPa : 820 rack travel mm : 14.15 Tolerance mm : + 0.20
control lever position degree tolerance degree		Pressure hPa : 420 rack travel mm : 12.10 Tolerance mm : + 0.05
control lever position degree talerence degree		Start interlock Rated speed rpm : > 100 Rated speed rpm : < 280
Testing: Rated speed rpm	: 350	Check speed 1/min :> 80
rack travel mm Tolerance mm	: 5.50 : ← 0.10	Check speed 1/min : < 300
Rated speed rpm	+	FUEL DELIVERY CHARACTERISTICS
CRT mm min. Rated speed rpm	: > 8.60 : 350	Aneroid pressure hPa : 1500
TORQUE CONTROL	 ‡	Rated speed rpm : 650 Del. quantity cm3/1000 strokes : 197.0
Rated speed rpm rack travel mm		Tolerance cm3/1000 strokes : +- 3.0 Check tolerance
Tolerance mm	: ← 0.05	cm3/1000S. : +- 6.0 Spreed
Rated speed rpm rack travel mm Tolerance mm	: 650 : 15.00 : + 0.10	Tolerance cm3/1000 strokes : 12.0 Check tolerance
Rated speed rpm	: 900 : 15.40	cm3/1000s. : 16.0 Aneroid pressure
Tolerance mm	: + 0.15	hPa : - Rated speed rpm : 500 Del. quantity
ANEROID/ALTITUDE COMPENSATOR TEST		cm3/1000 strokes : 111.0 Tolerance cm3/1000 strokes : +- 2.0
SETTING	1	Check tolerance cm3/1000s. : +- 4.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1050 : 1500 : 15.50 : + 0.05	STARTING FUEL DELIVERY

rack travel mm Tolerance mm	: 20.50 : + 0.50
Del. quantity cm3/1000 strices	: 195.0
Tolerance cm3/1000 strokes Check tolerance	: + 20.0
cm3/1000s.	: ← 24.0

LOW IDLE

Rated speed rpm Del. quantity	:	350	
cm3/1000 strokes	:	25.0	
Tolerance cm3/1000 strokes	: +	3.0	
Check tolerance cm3/1000s.	: +-	5.0	
Spreed Tolerance			
cm3/1000 strokes	:	7.0	
Check tolerance cm3/1000s.	:	11.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 03,04,97

Test oil

: ISO 4113

Combination No. : 0 402 776 839

Injection pump

Pump designation : PES6P120A320RS7437

EP type number : 0 412 726 970

Governor

Governer design. : RSV550...1000P1A678

Governer no. : 0 421 833 597

Cust. part No. : 836854748

Customer-spec. information Customer : SISU

Motor

: 645 DSIE

Power KW

: 270.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

Tolerance °C

Overflow valve

: 1 417 413 047

Inlet press. bar :

1.5

Tolerance bar

: +-0.1

Test nozzle holde

assembly

: 1 688 901 103

Opening pressure

bar

208.5

Tolerance bar

: + 1.5

Test Lines

: 1 680 750 008

Outside diameter :

6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0

Tolerance bar : + 1.0

Prestroke mm : 4.55 : **←** 0.05

Tolerance mm Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 10.50

Tolerance mm : \leftarrow 0.50

Firing order : 1-5- 3- 6- 2-

: 0-60-120-180-240 Phasing

: +- 0.30 Tolerance

Check

: +- 0.50 tolerance *NW

Start of delivery mark

Barrel no. : 1

BASIC SETTING

700 Rated speed rpm :

14.30 Rack travel in mm :

Tolerance mm: \leftarrow 0.05

Del. quantity

cm3/1000 strokes :

270.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance cm3/1000s. : +- 4.0	+ Check tolerance + cm3/1000s. : + 4.0 + Spreed
Spreed	Tolerance cm3/1000 strokes : 7.0
Tolerance cm3/1000 strokes : 7.0	Check tolerance cm3/1000s. : 10.0
Check tolerance cm3/1000s. : 10.0	CONTROL 1 THER
	CONTROL LEVER
Rated speed rpm : 550	+ control lever + position degree : 50.0 + tolerance degree : + 4.0
Rack travel in mm: 4.00 Tolerance mm: + 0.20	+ control lever
Del. quantity cm3/1000 strokes : 22.0 Tolerance	<pre>position degree : 100.0 tolerance degree : +- 4.0</pre>
cm3/1000 strokes : +- 2.5 Check tolerance	RATED SPEED : 13.30
cm3/1000s. : +- 5.0 Spreed Tolerance	+ Rated speed rpm : 1040 + Tolerance 1/min : +- 5
cm3/1000 strokes : 5.0 Check tolerance	rack travel mm : 4.00 Rated speed rpm : 1090
cm3/1000s. : 8.0	Tolerance 1/min : + 15
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	+ rack travel mm : 0.80 + Tolerance mm : + 0.50 + Rated speed rpm : 1200
GUIDE SLEEVE POSITION	LOW IDLE
control lever	1
position degree : - 3 Rated speed rpm : 800	control lever position degree : 80.0 tolerance degree : +- 4.0
Rack travel in mm : 0.50 Tolerance mm : + 0.20	control lever position degree : 30.0
governor spring pre-tension	tolerance degree : +- 4.0
click setting x : 6.00	Setting point w/out bumper spring
FULL LOAD DELIVERY AT FULL LOAD STOP	+ Rated speed rpm : 550 + rack travel mm : 3.50 + Tolerance mm : + 0.10
Rated speed rpm : 700 Aneroid pressure	Testing:
hPa : 2000 Del. quantity cm3/1000 strokes : 270.0	Rated speed rpm : 550 rack travel mm : 4.00
Tolerance cm3/1000 strokes : + 1.0	+ rack travel mm : 4.00 + Tolerance mm : +- 0.20
-	+ rack travel mm : 2.00

Rated speed rpm		+	Del. quantity	
Tolerance 1/min	: ← 30	+	cm3/1000 strokes	: 246.0
		+	Tolerance	
		 +	cm3/1000 strokes	: +- 3.0
TORQUE CONTROL		+	Check tolerance	
		+	cm3/1000s.	: +- 6.0
Rated speed rpm	: 700	+	Spreed	
rack travel mm	: 14.30	+	Tolerance	
Tolerance mm	: ← 0.05	+	cm3/1000 strokes	: 10.0
		1	Check tolerance	
Rated speed rpm	: 1000	1	cm3/1000s.	: 14.0
rack travel mm		1		
Tolerance mm		1	Aneroid pressure	
TOTOL CHILD THE		1	hPa	• _
			Rated speed rpm	: 500
ANEROID/ALTITUDE		T	Del. quantity	• 500
COMPENSATOR TEST		· T	cm3/1000 strokes	: 177.0
COMPENSATOR TEST		Ť		: 177.0
		†	Tolerance	
OFFERNA		<u>†</u>	cm3/1000 strokes	: + 1.0
SETTING		Ť	Check tolerance	
		+	cm3/1000s.	: +- 4.0
Rated speed rpm		+		
Pressure hPa	: 2000	+		
rack travel mm	: 14.30	+		
Tolerance ma	: +- 0.05	-}.	STARTING FUEL DEL	IVERY
		+		
Pressure hPa	: -	+	Rated speed rpm	: 100
Rated speed rpm	: 5 00	+	rack travel mm	: 20.50
rack travel mm	: 10.70	+	Tolerance mm	: ← 0.50
Tolerance mm	: +- 0.10	-{-	Del. quantity	
		+	cm3/1000 strokes	: 238.0
MEASUREMENT		1	Tolerance	20010
			cm3/1000 strokes	: +- 15.0
Rated speed rpm	: 500	1	Check tolerance	
nated speed i piii	. 300		cm3/1000s.	: + 19.0
Pressure hPa	: 1410		· · · · · · · · · · · · · · · · · · ·	
rack travel mm	: 3.10	1		
Tolerance mm	: + 0.20	I		
toterance min	. +- 0.20	I		
Pressure hPa	: 700	I	LOW IDLE	
rack travel ma	: 0.25	1	2017 2022	
Tolerance mm	: + 0.05	1	Rated speed rpm	: 550
TOTE AT ICE THEIR	. 1- 0.05	I	Del. quantity	. 550
Start interlock		Ţ	cm3/1000 strokes	: 22.0
Stant Intentock		T	Tolerance	. 22.0
Dakad assad assa	. > 100	Ť		2.5
Rated speed rpm	: > 100	†	cm3/1000 strokes	: +- 2.5
Rated speed rpm	: < 440	†	Check tolerance	
A 1 - 1		†	cm3/1000s.	: +- 5.0
Check		+	Spreed	
speed 1/min	: > 80	+	Tolerance	
Check		+	cm3/1000 strokes	: 5.0
speed 1/min	: < 460	+	Check tolerance	
		+	cm3/1000s.	: 8.0
		+		
FUEL DELIVERY CHA	RACTERISTICS	+		
A		†		
Aneroid pressure		†		
hPa	: 2000	†		
Rated speed rpm	: 1000	†	End of test speci	fication sheet
		+		

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 07.04.97

Test oil

: ISO 4113

Combination No.

: 0 403 446 333

Injection pump

Pump designation : PES6MW100/720RS1131

EP type number

: 0 413 406 165

Governor

Governer design. : RQV300...1300MW151

Governer no.

: 0 420 083 333

Cust. part No. : 0260747102

Customer-spec. information Customer

Moto:

: MB-NFZ : OM 366 LA

Power KW

: 155.0

TEST BENCH REQUIREMENTS

Inlet line

: 3.1

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve

: 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

208.5

Tolerance bar

1.5

Test Lines

: 1 680 750 089

Outside diameter :

8.0

x inside diameter : 3.0

600 x length mm

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0

Tolerance bar : +-1.0

Prestroke mm 3.65

: + 0.05Tolerance mm

Check

tolerance ma : +- 0.10

Rack travel in mm : 10.50

Tolerance mm : **←** 1.50

Firing order

: 1-5-3-6-2-: 4

Phasing : 0-60-120-180-240

Tolerance : +- 0.50

Check

tolerance *NW

: + - 0.75

BASIC SETTING

1300 Rated speed rpm

Rack travel in mm: 13.15

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes :

100.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s.

3.0 : +-

Spreed

Tolerance cm3/1000 strokes : 3.5	control lever
Check tolerance cm3/1000s. : 6.0	position degree : 116 Rated speed rpm : 1440
	Rack travel in mm : 10.00 Tolerance mm : + 2.70
Rated speed rpm : 300	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 6.50	+
Tolerance mm : + 0.10	Rated speed rpm : 1300
Del. quantity cm3/1000 strckes : 11.0	+ Aneroid pressure + h2a : 1000
Tolerance	+ Del. quantity
cm3/1000 strokes : +- 2.0 Check tolerance	+ cm3/1000 strokes : 100.0 + Tolerance
cm3/1000s. : +- 4.5	- cm3/1000 strokes : + 1.0
Spreed	+ Check tolerance
Tolerance	+ cm3/1000s. : +- 3.0
cm3/1000 strokes : 3.5 Check tolerance	+ Spreed
cm3/1000s. : 5.0	+ Tolerance + cm3/1000 strokes : 3.5
	+ Check tolerance
	- cm3/1000s. : 6.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	<u> </u>
	+ CONTROL LEVER
GUIDE SLEEVE TRAVEL	· }
Rated speed rpm : 1355	<pre>+ control lever + position degree : 113.0</pre>
guide sleeve	tolerance degree : +- 4.0
travel mm : 8.65	+
Tolerance mm : + 0.15	RATED SPEED
Dated around non- a 700	+ rack travel mm : 12.10
Rated speed rpm : 300 guide sleeve	+ Rated speed rpm : 1345 + Tolerance 1/min : +- 5
travel mm : 1.37	+ voter differ triaini
Tolerance mm : + 0.20	rack travel mm : 4.00
	Rated speed rpm : 1460
Rated speed rpm : 885 guide sleeve	Tolerance 1/min : + 15
travel mm : 5.01	+ rack travel mm : 0.50
Tolerance mm : +- 0.25	Tolerance mm : +- 0.50 Rated speed rpm : 1550
Rated speed rpm : 490	Indica speed (pill . 1990
guide sleeve travel mm : 2.86	I
Tolerance mm : + 0.25	
	LOW IDLE
Rated speed rpm : 1610 guide steeve	‡
travel mm : 11.50	+ control lever
Tolerance mm : ← 0.50	position degree : 69.0 tolerance degree : + 4.0
GUIDE SLEEVE POSITION	Testing:
	Rated speed rpm : 300

rack travel mm Tolerance mm	: 6.50 : + 0.10	+ Aneroid pressure + hPa : 1000
Rated speed rpm	: 200	+ Rated speed rpm : 600 + Del. quantity
CRT mm min.	: > 8.00	+ cm3/1000 strokes : 86.0 + Tolerance
	. , 0.00	+ cm3/1000 strokes : +- 1.5
TORQUE CONTROL		+ Check tolerance + cm3/1000S. : +- 4.0 + Spreed
Rated speed rpm rack travel mm	: 13.15	Tolerance cm3/1000 strokes : 5.0
Tolerance mm	: +- 0.05	+ Check tolerance + cm3/1606S. : 7.0
Rated speed rpm rack travel mm	: 600 : 13.15	+ Aneroid pressure
Tolerance mm	: ← 0.10	+ hPa : -
		+ Rated speed rpm : 500 + Del. quantity
ANEROID/ALTITUDE COMPENSATOR TEST		+ cm3/1600 strokes : 42.0 + Tolerance
		+ cm3/1000 strokes : +- 1.0 + Check tolerance
SETTING		cm3/1000s. : +- 3.0
Rated speed rpm	: 500	}
Pressure hPa	: 1000	
rack travel mm		+ STARTING FUEL DELIVERY
Tolerance mm	: ← 0.10	†
D		Rated speed rpm : 100
Pressure hPa	500	+ Del. quantity + cm3/1000 strokes : 105.0
Rated speed rpm Tolerance mm	: + 0.10	+ Tolerance
TOTEL BLICE HILL	. , 0.10	cm3/1000 strokes : + 5.0
MEASUREMENT		+ Check tolerance
		+ cm3/1000s. : +- 8.0
Rated speed rpm	: 500	‡
Pressure hPa	: 350	+
rack travel mm	: 1.75	
Tolerance may	: +·· 0.15	+ LOW IDLE
Pressure hPa	: 200	Rated speed rpm : 300
rack travel mm	: 0.75	+ Del. quantity
Tolerance mm	: ← 0.05	+ cm3/1000 strokes : 11.0
.		+ Tolerance
Start interlock		+ cm3/1000 strokes : +- 2.0
Poted speed and	. \ 100	+ Check tolerance + cm3/1000S. : +- 4.5
Rated speed rpm Rated speed rpm	: > 100 : < 220	+ cm3/1000s. : +- 4.5 + Spreed
rated speed thin	. ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` `	Tolerance
Check		cm3/1000 strokes : 3.5
speed 1/min	: > 80	† Check tolerance
Check		+ cm3/2000s. : 5.0
speed 1/min	: < 250	‡
		
	RACTERISTICS	<u> </u>